

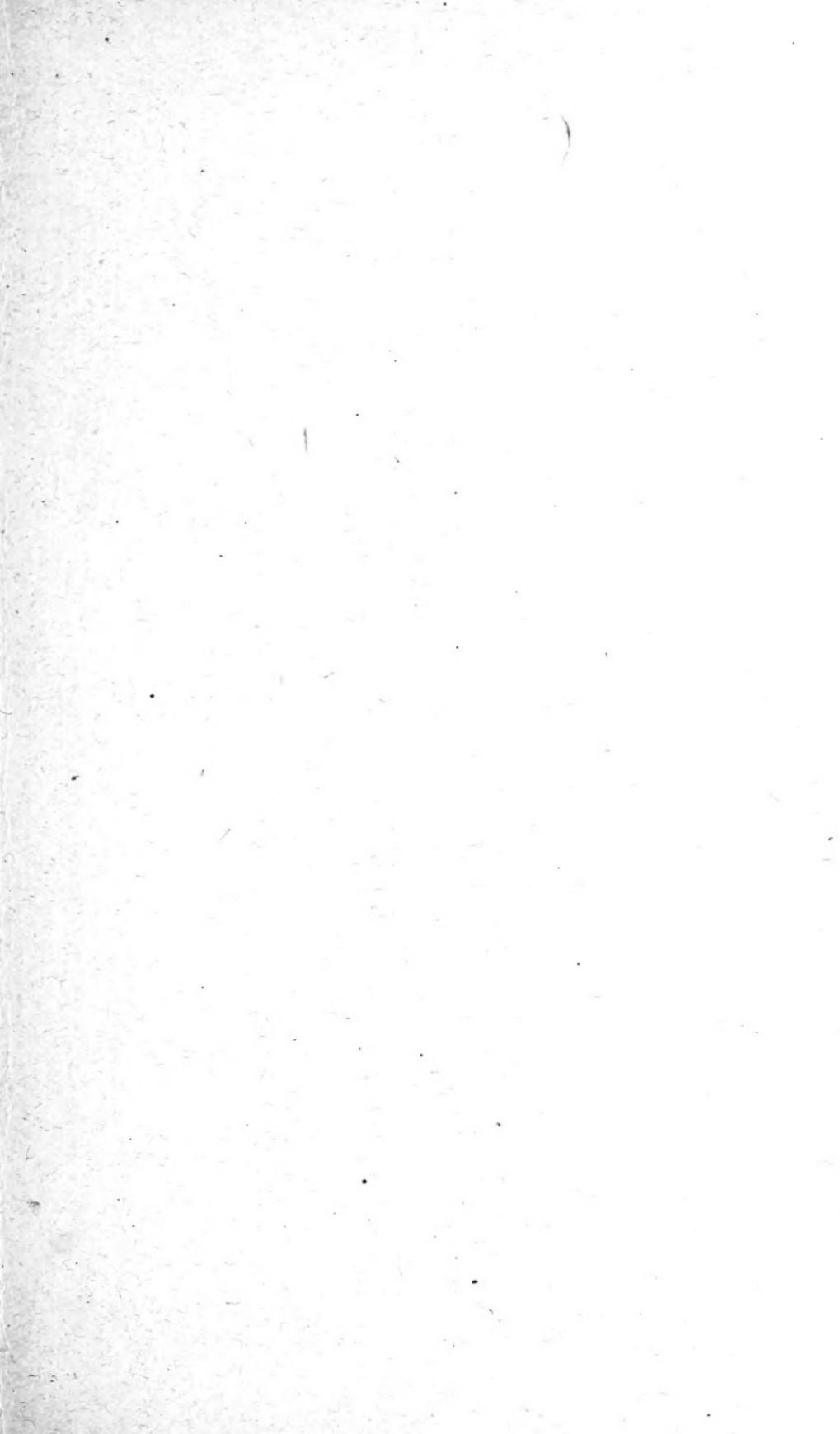
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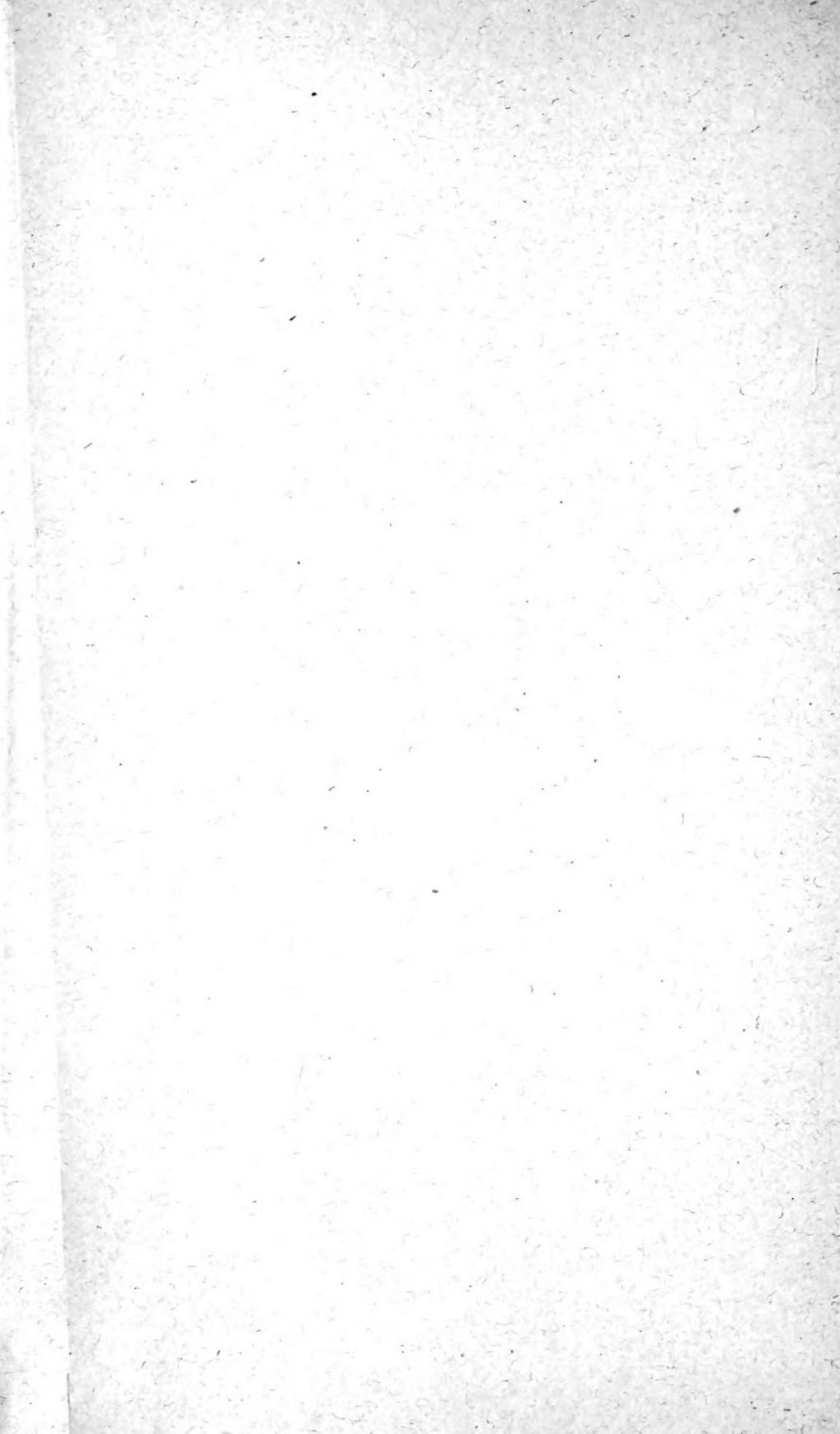
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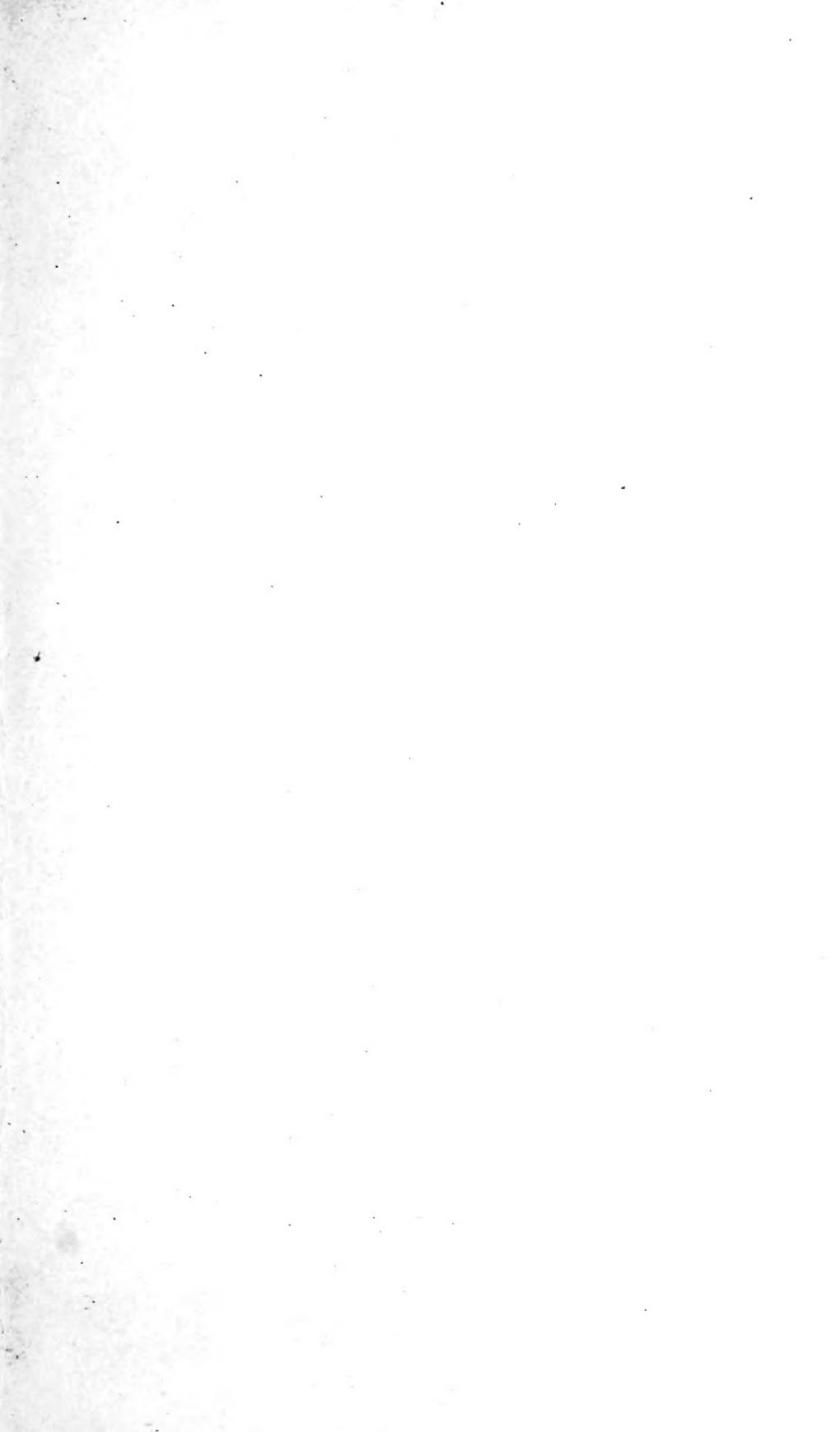
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BIBLIOGRAPHY
OF
YORKSHIRE GEOLOGY



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PROCEEDINGS OF THE YORKSHIRE GEOLOGICAL SOCIETY
VOL. XVIII.

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OF
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R.H.

(C. FOX-STRANGWAYS' MEMORIAL VOLUME)

X 55.091 (A 2.74)

BY

T. SHEPPARD

M.Sc., F.G.S., F.R.G.S., F.S.A.(SCOT.)

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PREFACE

THIS Bibliography is based upon an incomplete manuscript for the years 1534-1892, by the late C. Fox-Strangways, F.G.S. This has been checked and considerably amplified. In connection with the old books dealing with Spas, etc., Fox-Strangways spent a considerable time at the British Museum, and, as a result, few additions have had to be made to that section of his work. For the entries for the years 1893-1914 (from page 254 to the end) I am responsible.

The completion of this Bibliography in the comparatively short time of five years has been rendered possible by the fact that I have in my possession complete sets of most of the geological and natural history publications which contain papers on Yorkshire. I have also had access to many rare books, pamphlets and maps, and have paid many visits to the libraries in London and elsewhere, especially with regard to the earlier publications. To all those who have so willingly helped, I am very grateful; especially to Mr. George Barrow, of H.M. Geological Survey, for his pains in completing and amplifying the information Fox-Strangways had prepared in reference to the maps of the Geological Survey (pages 477-502).

T. S.

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INTRODUCTION

IN compiling this Bibliography, assistance has necessarily been obtained from lists already published, especially with regard to topographical works, which often contain items of geological interest.

Phillips' *Geology of Yorkshire* (1st edition, 1829 ; 2nd, 1835 ; 3rd, 1875) contains lists of several of the more important works bearing upon the geology of the county. The Geological Survey publications (of which there is an unusually large number for our county), generally contain lists of papers referring to the particular area covered by a memoir.

During the years 1874-1896, the late James W. Davis printed lists of publications on the geology of the county for each of those years, in the Proceedings of the Yorkshire Geological and Polytechnic Society (Vols. VI.-XII.). A useful account of the chief publications in this Society's proceedings was also given by Davis in his *History of the Society* (forming Vol. X. of the Proceedings, 479 pages, published in 1899). It covered the years 1837 to 1887.

In 1903, Mr. W. Lower Carter compiled a 'Classified Index to the first fourteen volumes of the Proceedings.'*

Perhaps, however, the most complete lists appeared in *The Naturalist*, and the *Transactions of the Yorkshire Naturalists' Union*. These contained 'Papers and Records published with respect to the Geology and Palaeontology of the North of England,' and, of course, included Yorkshire ; in these bibliographies each item is plainly marked as to which county it refers. They appeared as follows :—

* See *Proceedings of the Yorkshire Geological Society*, vol. 15, part 1, pages 96-153.

For 1884 in <i>The Naturalist</i> for Dec. 1885, pp. 394-406.				
„ 1885 „ „ Nov. 1886, pp. 349-362.				
„ 1886 „ „ June 1888, pp. 178-188.				
„ 1887 „ „ Feb. 1889, pp. 61-67.				
„ 1888 „ „ April-May 1890, pp. 121-138.				
„ 1889 „ „ Nov. 1890, pp. 339-350.				
„ 1890 „ „ Oct.-Nov. 1891, pp. 313-330.				
„ 1891 „ „ July-Aug. 1892, pp. 219-234.				
„ 1892 „ „ Sept. 1893, pp. 265-279.				
„ 1893 „ „ Sept.-Oct. 1898, pp. 273-296.				
„ 1894 „ „ Mar.-April 1899, pp. 81-103.				
„ 1895 „ „ Oct.-Nov. 1899, pp. 305-324.				
„ 1896 „ „ June 1900, pp. 173-191.				
„ 1897 „ „ Jan.-Feb. 1901, pp. 17-36.				
„ 1898 „ „ Oct.-Nov. 1901, pp. 305-324.				
„ 1899 „ „ Oct. 1902, pp. 317-356.				
„ 1900 „ „ April 1903, pp. 141-160.				
„ 1901 „ „ Oct.-Dec. 1903, pp. 413-416, 463-473.				
„ 1902 <i>Trans. Yorks. Nat. Union</i> , pt. 34, 1909, pp. 1-17.				
„ 1903 „ „ pp. 17-33.				
„ 1904 „ „ pp. 33-50.				
„ 1905 „ „ pp. 51-66.				
„ 1906 „ „ pp. 66-85.				
„ 1907 „ „ pp. 85-104.				
„ 1908 „ „ pp. 104-119.				
„ 1909 <i>The Naturalist</i> for July 1911, pp. 257-270.				
„ 1910 „ „ May-June 1912, pp. 152-160; 188-190.				
„ 1911 „ „ Nov.-Dec. 1912, pp. 345-352; 371-372.				
„ 1912 „ „ July 1913, pp. 261-270.				
„ 1913 „ „ May-June 1914, pp. 161-166; 193-199.				
„ 1914 „ „ 1915 (in the press).				

The first four of these lists (1884*-1888) were compiled by the late S. A. Adamson and Mr. Alfred Harker; from 1889 to

* This year Mr. G. A. Lebour assisted with the Northumberland and Durham entries.

1892 by Mr. Harker alone. Those from 1893 onward have been compiled by myself, and have supplied all the entries in the present bibliography from that date to 1908; I supplied the late C. Fox-Strangways with copies of my lists to be cut up for the purpose. Since the present volume has been in hand, the bibliographies appearing in *The Naturalist* have not contained entries dealing with Yorkshire, except of course, such papers, etc., as contained references to other counties as well as Yorkshire. For the years 1909 to 1914 (*i.e.*, since Fox-Strangways' death), the Yorkshire lists now appear for the first time.

Bibliographical lists relating to the geology of East Yorkshire, which I have compiled, have appeared in the *Transactions of the Hull Geological Society* since 1895.

Useful publications have been issued by the Geological Society of London. These 'Lists of Geological Literature added to the Geological Society's Library during the year,' were compiled by the Librarian, and edited by the Assistant Secretary (Mr. L. L. Belinfante). They have been published since 1893, and have supplied a number of references, particularly to papers appearing in foreign journals.

Since 1890, the Reports of the British Association have contained useful 'Classified Lists of the Contents of the Proceedings and Transactions of the Corresponding Societies,' compiled by Mr. Stewardson, and issued with the Report of the Corresponding Societies' Committee.

In addition, there are the special bibliographies dealing with 'Coast Erosion,' 'Underground Water,' 'Borings and Wells,' etc., which have appeared in the Reports of the British Association and other publications.

Davis and Lees' *West Yorkshire* (1880, 415 pp.), contains a 'Bibliography on Geology and Physical Geography,' 1674-1876 (28 pp.)

A work of particular value, which seems to be almost forgotten, is *Bibliographia Zoologiae et Geologie*, a 'general catalogue of all books, tracts and transactions on Zoology and Geology, by Prof. Louis Agassiz, corrected, enlarged and edited by H. E. Strickland, M.A., F.G.S., etc.'

The work

occupies four substantial 8vo volumes, which were issued by the Ray Society, between 1848 and 1854.*

Vol. I., issued in 1848, contains entries A-C (pp. 1-506).

Vol. II., issued in 1850, contains entries C-F (pp. 1-492).

Vol. III., issued in 1852, contains entries G-M (pp. 1-657).

Vol. IV., issued in 1854, contains entries N-Z (pp. 1-694).

Also of service is '*The Yorkshire Library*: a bibliographical account of books on Topography, Tracts of the Seventeenth Century, Biography, Spaws, Geology, Botany, Maps, Views, Portraits and Miscellaneous Literature relating to the county of Yorkshire, with collations and notes on the books and their authors. By William Boyne, F.S.A., author of 'The Tokens of the Seventeenth Century.' Taylor & Co., London, 1869, 304 pages, 4to.

Another is *The Book of British Topography, a Classified Catalogue of the Topographical Works in the Library of the British Museum relating to Great Britain and Ireland*, by John P. Anderson, London, 1881, royal 8vo, 472 pages (Yorkshire, pages 308-333). A second edition is now in the press.

More recently (1907), Messrs. Constable & Co., published an *Index of Archaeological Papers, 1665-1890*,† by George Laurence Gomme (910 pages). This contains particulars of several thousand papers appearing in the various publications of the numerous archaeological, etc., societies in the country (a list of which is given). The entries are in alphabetical order. Unfortunately, there is no index to the index, and to ascertain what Yorkshire papers appear in it, necessitates an examination of every entry in the volume.

Other useful items are:—

British Topography, or an Historical Account of what has been done for illustrating the Topographical Antiquities of Great Britain and Ireland. Volume I., 4to, 1780, lii. and 792 pp. and 62 pages of indexes (unnumbered); Volume II., 1780,

* On the last volume the name of Sir William Jardine is added to the title-page. Reference is made to a proposed supplementary volume, but this was never issued.

† From 1891 onward, and until quite recently, Messrs. Constable have published an 'Annual Index of Archaeological Papers,' which many of the societies purchased and had bound up with their Transactions.

822 pages and 61 pages of indexes (unnumbered). Yorkshire occupies pages 395-480 of Volume II., and there are many references to the county in the general introduction, the notes on maps, etc. My copy is evidently the first edition ; there were certainly others later.

The English Topographer, or an Historical Account of all the pieces that have been written relating to the Antiquities, Natural History, or Topographical Description of any part of England. By an impartial hand [R. Rawlinson], London, 8vo, 1720.

Bibliotheca Topographica Anglicana, or a new and complete Catalogue of all the Books extant relating to the Antiquities, Description and Natural History of England. By John Worrall, London, 12mo, 1736.

Anecdotes of British Topography, or an Historical Account of what has been done for illustrating the Topographical Antiquities of Great Britain and Ireland. By R. Gough. London, 4to, 1768. Another edition, 1780.

A Catalogue of the Books relating to British Topography and Saxon and Northern Literature, bequeathed to the Bodleian Library in 1799, by Richard Gough, Esq. By Bulkeley Bandinal, Oxford, 4to, 1814.

Lives of Topographers and Antiquaries who have written concerning the Antiquities of England, with a complete list of their works. By J. P. Malcolm. London, 4to, 1815.

A Catalogue of Books relating to the History and Topography of England, Wales, Scotland, Ireland. By Sir R. C. Hoare. London, 8vo, 1815.

A Catalogue of the Hoare Library at Stourhead. By J. B. Nichols. London, 8vo, 1840.

A Bibliographical Account of the principal works relating to English Topography. By William Upcott. 3 vols., 4to, 1818.

A Handbook to the Topography . . . of England and Wales : being a descriptive account of twenty thousand most curious and rare books. By J. C. Hotten. London, 8vo, 1863.

The Science Year Book, published in recent years, has also contained lists of papers printed by local scientific societies.

Of the various geological publications that have a large proportion of Yorkshire entries, full particulars are given in my book on *Yorkshire's Contribution to Science* (1915). Perhaps the chief of these are *Proceedings of the Yorkshire*

Geological Society, *The Geological Magazine*, *The Quarterly Journal*, and other publications of the Geological Society of London; *The Proceedings of the Geologists' Association*, *The Memoirs of the Palaeontographical Society*, *The Geological Record*, *The Reports of the British Association for the Advancement of Science*, *The Memoirs of the Geological Survey*, and the Publications of the *Leeds* and *Hull Geological Societies*. *The Naturalist* has also contained many important geological notes.*

In addition to these a number of local bibliographical works have appeared, ostensibly dealing with local topography, antiquities, etc., but which also include geological items.

In 1895 the late J. Norton Dickons published *Bibliotheca Bradfordiensis*,† or a catalogue of Books, Pamphlets, etc., published at Bradford, 8vo, 241 pages.

In 1906 the late J. Horsfall Turner published a work on *Halifax Books and Authors* (4to, 262 pages). Later, Mr. C. Crossland published a series of papers on 'Halifax Bibliography and Authors,' in the *Transactions of the Halifax Antiquarian Society*. Parts III. and IV. of these contributions dealing with natural history, and, of course, including geology, appeared in 1911 and 1912.

From Sheffield has been issued a *Bibliography of Sheffield and Vicinity, Section I to the end of 1700*, by W. T. Freemantle, 1914, 4to, 285 pages.

In 1912, Mr. A. H. Furnish, the York City librarian, issued a useful *List of Books in the Local Collection relating to the County of Yorkshire, Classified Lists, Yorkshire printed Books, Photographs, Engravings, etc.* (8vo, 172 pages). Another useful book dealing with early York items is Robert Davies' *Memoir of the York Press*, with notices of Authors, Printers and Stationers in the sixteenth, seventeenth and eighteenth centuries, issued in 1868, 8vo, 397 pages.

For Whitby has been issued *Whitby Authors and their Publications* by the Rev. Gideon Smales. Whitby, 1867, pp. 248.

* For a history of this journal see *The Naturalist* for April, 1915, pages 131-138.

† This title appeared on the cover only.

In Hull nothing of the kind has yet appeared, though the catalogue of Hull books and pamphlets in the Wilberforce Historical Museum, Hull, which I have almost ready for publication, will practically supply the deficiency, as the library is unusually complete. A list of Hull plans and engravings, some of which have a geological interest, appeared in my *Evolution of Kingston-upon-Hull* (1911, 8vo, 203 pages).

With regard to the method of quoting references, and the arrangement of the bibliographical work generally, the scheme as outlined by Mr. C. Davies Sherborn in his 'Notes on Bibliography, Publications and Nomenclature' (see *The Naturalist*, January, 1908, pages 5-9), has been followed.

In connection with the present list, it must be borne in mind that it has been necessary to include everything, no matter how trivial, that has been published bearing in any way upon the geology and physical features of the county, as it can never be known to what extent apparently unimportant notes may be of service to students. Errors in spelling are quoted as they occur in the titles of the papers, though usually an indication of the error has been given by a note, or by a correction in square brackets.

The nature of the present volume necessitates unusual care being taken in the preparation of the index, so that reference may readily be made to the papers of any particular author, or to the publications relating to any particular district, or subject, though for the most part the index deals only with such information as is obtainable from the titles of the publications quoted. Usually, however, authors and editors of journals are careful that the titles sufficiently describe the nature of the contents of the contributions. It only rarely happens that a record is allowed to appear with such a heading as 'A Find ! ! !' (sic) which was the title of a paper describing some fossil footprints found in the Oolitic Sandstone near Whitby, a little while ago. As 'A Find ! ! !' may mean anything from a threepenny piece to a 'confused optic,' it has been thought advisable in such cases to ignore the actual title of the paper, and to index it from the nature of its contribution to geological science, if any.

I had recently occasion to refer to a well-known standard

work on Yorkshire Geology for information with reference to the source of the pebbles in Coal Measure sandstones. The only way (except reading it), of ascertaining where such information occurred in the volume, was to look under the word 'sand-stone,' which was indexed as appearing on some dozens of pages. To all of these, therefore, reference had to be made in order to obtain the necessary information. It seems clear that there ought to have been an index to the 'sand-stone' entries, or, in other words, an index to the index. The necessity for giving every such detail in the following index, accounts for its unusual length.

PROCEEDINGS
OF THE
YORKSHIRE GEOLOGICAL SOCIETY.

(C. FOX-STRANGWAYS' MEMORIAL VOLUME).

BIBLIOGRAPHY OF YORKSHIRE GEOLOGY.

1534.

- 1 LELAND, JOHN.—*The Itinerary of John Leland the Antiquary.* [See under T. Hearne, 1710].

1551.

- 1 CAMDEN, W.—*Magna Brittannia et Hibernia, Antiqua et Nova.* [See under 1720].

1577.

- 1 HOLINSHED's Chronicle. The Firste [and Second] Volume of the Chronicle of Englande, Scotlande and Ireland. 2 Vols. Folio. 1577.

1586.

- 1 CAMDEN, W.—*Britannia sive florentissimorum regnum Angliae, Scotiae, Hiberniae, et Insularum adiacentium et intima antiquitate Chorographica descriptio.* [Knaresborough, p. 405, Devil's Arrows, Boroughbridge, p. 406]. 16mo. London. Another Ed. 8vo. London, 1587. Ed. 3. 8vo, London, 1590. German, 8vo. Frankfurt, 1590. Ed. 4. 4to. London, 1600. Another Ed. Fol. London, 1607. Another Ed. 8vo. Frankfurt, 1816. Also many later editions by T. P. HOLLAND, E. GIBSON and R. GOUGH.

1587.

- 1 CAMDEN, W.—[See under 1586].

1590.

- 1 CAMDEN, W.—[See under 1586].

1600.

- 1 CAMDEN, W.—[See under 1586].

1607.

- 1 CAMDEN, W.—[See under 1586].

1616.

- 1 CAMDEN, W.—[See under 1586].

1626.

- 1 DEANE, E.—*Spadacrene Anglicæ, or the English Spaw-Fountaine. Being a Briefe Treatise of the acide or tart Fountaine in the Forest of Knaresborrow in the West Riding of Yorkshire. As also a Relation of other medicinall Waters in the said Forest.* Pp. 32. 4to. *London.* Ed. 2. 1649, under different title, with additions by JOHN TAYLOR. Pp. 39. 4to. *York.* Ed. 3, 1654, 12mo. *York.* Reprinted with additional observations, by M. STANHOPE and others, under the title ‘*Spadacrene Anglicæ*’; or the English Spaw. Being an account of the Situation, Nature . . . and admirable cures performed by the Waters of Harrogate, and Parts adjacent, and also The Observations of the ingenious Dr. Stanhope Pp. 41. 8vo. *Leeds,* 1736.

- 2 STANHOPE, MICHAEL.—*Newes out of York-Shire, or an Account of a journey in the true discovery of a Soveraigne Minerall Medicinall Water, in the West Riding of Yorkshire, neare an ancient Towne called Knaresbrough, not inferiour to the Spa in Germany.* 4to. *London.* Another Ed. 4to. Pp. 30. 1627.

1627.

- 1 STANHOPE, MICHAEL.—[See under 1626].

1628.

- 1 STANHOPE, MICHAEL.—*Newes out of York-Shire, or an Account of a Journey in the true discovery of a Souerign*

Minerall Medicinall Water in the West Riding, neere an ancient toune called Knaresborough . . . also a taste of other Minerall Waters, by M. S. Pp. 28. Small 4to.

1632.

- 1 STANHOPE, M.—Cures without Care, or a summons to all such as finde little or no helpe by the use of Physick, to repaire to the Northern Spaw; wherein by many presidents of a few late yeares, it is evidenced to the world, that infirmities, of their owne nature desperate, and of long continuance, have received perfect recovery by vertue of Minerall waters neare Knaresborow in the West-riding of Yorkshire. Also a description of the said water, and of other rare and usefull springs adjoining, the nature and efficacie of the Minerals contained in them, with other not impertinent notes. 4to. *London*.
- 2 —— A Relation of certain particular cures, done by vertue of Mineral waters, neare Knaresborow in the West-riding of the county of Yorkshire. 4to. *York*. Another Ed. 4to. *York*, 1649. Another Ed. 8vo. 1654. Reprinted as second part of Dr. Dean's Spad. Ang. 8vo. *Leeds*, 1736.

1649.

- 1 DEANE, E.—Spadacrene Anglica. [See under 1626].

1652.

- 1 FRENCH, J.—The York-shire Spaw; or, a treatise of four Famous Medicinal Wells, viz., the Spaw or Vitrioline-Well; the stinking, or Sulphur-Well; the Dropping, or Petrifying-Well; and St. Mugnus-Well near Knaresborow in Yorkshire; together With the causes, virtues and use thereof. [Long dissertation on the origin of the springs]. 8vo. *London*. Another Ed. Pp. 124. 1654. Reprinted under the title 'A pocket companion for Harrowgate Spaw.' 8vo. *Halifax*, 1760.

1654.

- 1 DEANE, E.—Spadacrene Anglica. [See under 1626].
- 2 FRENCH, J.—[See under 1652].
- 3 STANHOPE, M.—[See under 1632].

1655-1673.

- 1 DODSWORTH, R., and W. DUGDALE.—*Monasticon Anglicanum sive Pandectæ Coenobiorum, Benedictinorum, Cisterciensium, Carthusianum. A primordiss ad eorum usque dissolutionem. Ex. MSS. Codd. Ad Monasteria olim pertinentibus ; Archivis, Turrium Londinensis, Eboracensis ; Curiarum Siaccarii, Augmentationum ; Bibliothecis Bodleiana ; Coll. Reg. Coll. Bened. Arundelliana, Cottoniana, Seldoniana, Huttoniana aliisque digesti. [Minerals at several places in Yorkshire referred to]. 3 vols. fol. London. Many editions.*
- 2 DUGDALE, W.—[See R. Dodsworth].

1656.

- 1 SHORT.—*Spadacrene Eboracensis. [See under G. Neale, 1734].*

1660.

- 1 WITTIE, R.—*Scarborough Spaw ; or, a Description of the Nature and Vertues of the Spaw at Scarborough in Yorkshire, 8vo. London. Another Ed. 8vo. York, 1667.*

1662.

- 1 DUGDALE, W.—*The History of Imbanking and Drayning of Divers Fenns and Marshes, Both in Foreign Parts, and in this Kingdom ; and of the Improvements thereby. [Plan of Hatfield Chase]. Fol. London. Ed. 2. Revised and corrected by C. N. COLE. Fol. London, 1772.*
- 2 FULLER, T.—*The History of the Worthies in England. [Medicinal Waters. Pt. iii. Pp. 188, 189]. Fol. London.*

1667.

- 1 WITTIE, R.—*Scarborough Spaw. [See under 1660].*

1669.

- 1 SIMPSON, W.—*Hydrologia Chymica ; or, The Chymical Anatomy of the Scarborough and other Spaws in Yorkshire. Wherein are interspersed Some Animadversions upon Dr. Wittie's lately Published Treatise of the Scarborough-Spaw. Also, a short Description of the Spaws at Malton and Knaresbrough. [Malton Spaw, pp. 134, 135 ; The Sweet Spaw and the Sulphur Well at Harrogate,*

pp. 136-147]. 8vo. *London*. Abstract and review in *Phil. Trans.*, vol. i., No. 42, pp. 850-852 ; No. 51, pp. 1037-1040.

2 SIMPSON, W.—Alom Works at Whitby—[See under 1867]. with other not impertinent notes. 4to. *London*.

3 WITTIE, R.—*Pyrologia Mimica* ; or, an Answer to *Hydrologia Chymica* of William Sympson Phylo-Chymico-Medicus ; In Defense of Scarbrough Spaw. Wherein The Five Mineral Principles of the said Spaw are defended against all his objections (by plain Reason and Experiments, and further confirmed by a Discovery of Mr. S., his frequent Contradictions and manifest Recantation. Also. A Vindication of the Rational Method and Practice of Physick called Galenical and a Reconciliation betwixt that and the Chymical). Likewise a further Discourse about the Origin of Springs. Pp. 312. 8vo. *London*. Noticed in *Phil. Trans.*, No. 49, p. 999, and No. 51, p. 1037. See also *Phil. Trans.*, No. 52, pp. 1050-1055 ; pp. 1074-1082 bis ; No. 56, pp. 1128-1131 ; and No. 57, pp. 1154-1156.

1670.

1 SIMPSON, W.—*Hydrological Essays* ; or, a Vindication of *Hydrologia Chymica* ; Being a further Discovery of the Scarbrough Spaw and of the right use thereof, and of the Sweet Spaw and Sulphur Well at Knaresborough : with a brief Account of the Allom Works at Whitby. Pp. 159. 8vo. *London*. Noticed in *Phil. Trans.*, No. 62, pp. 2032-2034.

2 TONSTALL, G.—Scarbrough Spaw spagyrically anatomized. Pp. 63. 16mo. *London*.

1671.

1 LISTER, M.—A Letter . . . on that of M. Steno concerning Petrify'd shells. [Ironstone quarries of Adderton in Yorkshire, p. 2283]. *Phil. Trans.*, vol. vi., No. 76, pp. 2281-84. *Hutton's Abrdg.*, vol. i., pp. 645-646.

1672.

1 TONSTALL, G.—A New-years-gift for Doctor Witty ; or, the Dissector anatomized : Which is a reply to the Discourse Intituled, An Answer to all that Doctor Tonstall has

writ, or shall hereafter Write, against Scarbrough Spaw. Pp. 162. 16mo. *London*. Noticed in *Phil. Trans.*, vol. vii., for 1672. No. 85, pp. 5019-5021.

- 2 WITTIE, R.—Scarbrough's Spagyrical Anatomizer dissected ; or, an Answer to all that Dr. Tonstall hath Objected in his Book against Scarborough's Spaw. . . . As also reflections upon a late Piece, called Vindication of Hydrologia Chymica. Pp. 127. 16mo. *London*.

1673.

- 1 BLOME, R.—Britannia ; or, a Geographical Description of the Kingdoms of England, Scotland, and Ireland, with the Isles and Territories thereto belonging . . . [Knaresborough Wells, p. 259]. Fol. *London*.

1674.

- 1 LISTER, M.—A Description of certain Stones figured like plants, and by some Observing Men esteemed to be Plants petrified. *Phil. Trans.*, vol. viii., No. 100. p. 6181.
- 2 RAY, JOHN.—A Collection of English Words not generally used, with their Significations and Original, in two Alphabetical Catalogues. The one of such as are proper to the Northern, the other to the Southern Counties. With Catalogues of English Birds and Fishes : and an Account of the preparing and refining such Metals and Minerals as are gotten in England. [The Allom Works at Whitby in Yorkshire, pp. 139-141. Ed. 2, pp. 201-203]. Pp. 148. 8vo. *London*. Ed. 2, 120. 1691.

1675.

- 1 LISTER, M.—Of an odd figured Iris. [Rainsborough Scar on Ribble and Eshton Terrace, Craven]. *Phil. Trans.*, vol. ix., for 1674, No. 110, p. 222.
- 2 —— Glossoptera tricuspis non-serrata. [Hindershelf Park, near Malton]. *Ibid.*, p. 223.
- 3 —— Of certain Dactili Idæi ; or, true Lapides Judaici, for kind found with us in Britain. [Spines of Cidaris from Newton and Hildenley]. *Ibid.*, p. 224.
- 4 —— A Letter containing his Observations of the Astroites ; or, Star-stones. [Pentacrinites from Bugthorpe and Lepington]. *Ibid.*, vol. x., No. 112, pp. 274-279.

- 5 SIMPSON, W.—*Zymologia Physica*; or, a brief Philosophical Discourse of Fermentation, from a new Hypothesis of Acidum and Sulphur. . . . With an additional Discourse of the Sulphur-bath at Knaresbrough. Pp. 149. 8vo. *London*. The Discourse published separately. Pp. 28. 8vo. *London* [1675].

1678.

- 1 LISTER, M.—*Historiæ Animalium Angliæ tres tractatus unus de Araneis alter de Cochleis tum Terrestribus tum Fluvialitis. Tertius de Cochleis Marin's*. . . . [Keighley, p. 247; Filey, p. 22]. 8vo. *London*.
- 2 WITTIE, R.—*Fons Scarburgensis: sive Tractatus de Omnis Aquarium generis origine ac usu. Particulariter de Fonti Minerali apud Scarbrough in Comitatu Eboracensi Angliæ*. Pp. 235. 8vo. *London*.

1679.

- 1 COLWALL, D.—An Account of the English Alum-Works. *Phil. Trans.*, vol. xii., No. 142, pp. 1052-1056. *Hutton's Abridg.*, vol. ii., pp. 458-461.
- 2 SIMPSON, W.—The History of Scarbrough-Spaw; or, a further Discovery of the excellent Vertues thereof. . . . [The rarities observable at Scarborough. Pyrites, Fossils, Alum Works, pp. 119-126]. Pp. 126. 12mo. *London*. Another Ed., with different title, 1680.

1680.

- 1 SIMPSON, W.—A History of Scarbrough Spaw. [See under 1679].

1682.

- 1 LISTER, MARTIN.—[See under 1684].

1683.

- 1 PRYME, ABRAHAM DE LA.—[See under 1870].

1684.

- 1 LISTER, MARTIN.—*De Fontibus Medicatis Angliæ Exercitatio Nova Prior*. [Alludes to Knaresborough and Harrogate, pp. 26, 28, 30, 45, 57, 62]. Pp. 64. 8vo. *Frankfurt and Leipsic*. 12mo. *Leyden*, 1686. (?) Earlier edition, 4to. *York*, 1682].

- 2 LISTER, MARTIN.—An Ingenious Proposal for a new sort of Maps of Countrys, together with Tables of Sands and Clays, such chiefly as are found in the North parts of England, drawn up about 10 years since, and delivered to the Royal Society, March 12th, 1683. *Phil. Trans.*, vol. xiv., No. 164, pp. 739-746, and duplicate pp. 737, 738.

1686.

- 1 LISTER, MARTIN.—*Exercitationes et Descriptiones Therma- rum ac Fontium Medicatorum Angliae. Eorum originem, salubrem usum et potationis modum tradentes.* [Knares- borough and Harrogate, pp. 26, 29, 32, 53]. Pp. 156. 12mo. *Leyden.* Another Ed. 12mo. 1689. Partly a reprint of ‘De Fontibus,’ 1684.

1689.

- 1 LISTER, MARTIN.—[See under 1686].

1691.

- 1 RAY, JOHN.—A Collection of English Words not generally used, etc. [See under 1674].

1693.

- 1 LISTER, M.—An Account of certain transparent Pebbles, mostly of the shape of the Ombriæ or Brontiæ. [Filey Brig and Scarborough]. *Phil. Trans.*, vol. xvii., No. 201, p. 778.

1694.

- 1 LEIGH, C.—*Phthisiologia Lancastriensis, cui accessit Testamen Philosophicum de Mineralibus Aquis In eodem Comitatu Observatis.* [Knaresborough, pp. 114, 136; Harrogate, p. 126]. 12mo. *London.*

1697.

- 1 FLOYER, JOHN.—An Enquiry into the Right Use and Abuses of the Hot, Cold, and Temperate Baths in England. [Pp. 113-117. A Letter from Dr. CLAYTON concerning the Virtues of St. Mungus’ Well, near Knaresborough in Yorkshire]. Pp. 144. 8vo. *London.* Ed. 2, ‘Ancient Psychrolusy revived,’ 1702; Ed. 3, History of Hot and Cold Bathing, Ancient and Modern; with an Appendix by Dr. E. BAYNARD. 8vo. *London, 1702, 1706, 1709,*

1715, 1722 (styled Eds. 1-5); Latin. 8vo. *Leyden*, 1699; French, 1718; German, 8vo. *Breslau*, 1729.

- 2 LEIGH, C.—*Exercitationes quinque. De Aquis Mineralibus, Thermis Calidis, Morbis Acutis, Morbis Intermittentib; Hydropoe.* [Knaresborough Springs]. 12mo. *Oxford*.
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- 1 JEFFERY'S, T.—*The County of York surveyed in 1767-1770. [Map in 20 sheets, each measuring 2 ft. by 2 ft.].*

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- 1 COLE, C. N.—[See under W. Dugdale].
- 2 DUGDALE, W.—*The History of Imbanking and Drayning of Divers Fenns and Marshes. Revised by C. N. Cole. [See under 1662].*

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- 2 INGRAM, DALE.—*Experiments with a New Well-Water discovered at Epsom, and compared with Harrigate (sic); showing their affinity, and ascertaining their contents. Gentleman's Magazine, vol. xliii., pp. 125-126.*
- 3 MONRO, D.—*An Account of the sulphureous mineral waters of Castle-Loed, and Fairburn in the county of Ross; and of the salt purging waters of Pitkeathly in the county of Perth in Scotland. [These waters compared with Harrogate]. Ibid., pp. 284, 285.*

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- 1 JARS, G.—*Voyages Métallurgiques, ou Recherches et Observations sur les Mines et Forges de fer, la Fabrication de l'acier, celle du fer-blanc, et plusieurs mines de charbonne tene, faites depuis l'annee 1757 jusques et compris 1769, en Allemagne, Suéde, Norwege, Angleterre et Ecosse. [Sheffield, vol. i., p. 255. Middleton Tyas, vol. iii., p. 72.*

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- 2 JARS, G.—Voyages Métallurgiques. [See under 1774].

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- 4 WALKER, ADAM.—[See T. West].
- 5 WEST, T.—A Guide to the Lakes in Cumberland, Westmoreland, and Lancashire. Addenda. Article vi., A Description of some natural curiosities in the Western edge of Yorkshire by ADAM WALKER (extracted from the *General Evening Post*, Sept. 25th, 1779), pp. 232-238. Article vii., A Tour to the caves in the West Riding of Yorkshire, pp. 238-270. Ed. 2. 8vo. *London*.

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- 5 WATSON, R.—Chemical Essays. [Clitheroe limestone, vol. ii., pp. 197, 201-204. Harrogate waters, vol. iii. (1782), pp. 191-205. Lead ore, p. 313. Observations on the Sulphur Wells at Harrogate, vol. v. (1787), pp. 1-42]. 5 vols. 8vo. *Cambridge.*

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- 1 PENNANT, T.—Arctic Zoology. [Description of the Yorkshire Coast, pp. x.-xiii.]. 2 vols. 4to. *London.*

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- 1 COLLINS, G.—Great Britain's Coasting Pilot. [See under 1723].

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- 1 BUCHAN, W.—Cautions concerning Cold Bathing, and drinking the Mineral Waters, being an Additional Chapter

to the Ninth Edition of his Domestic Medicine. [Harrogate, pp. 14, 16]. Pp. 20. 8vo. London. Numerous editions.

- 2 HARTLEY, T.—A concise account of some Natural Curiosities in the Environs of Malham, in Craven, Yorkshire. Pp. 68. Appendices, pp. 199. 8vo. London
- 3 TUKE, J.—Map of Holderness. Scale about 1 mile to $\frac{3}{4}$ of an inch [with measurements of the distances between churches, etc., and the sea]. Inserted in Poulson's 'History of Holderness.'
- 4 [WATSON], R., Bishop of Llandaff.—Observations on the Sulphur Wells at Harrogate, made in July and August, 1785. *Phil. Trans.*, vol. lxxvi., pp. 171-188. *Chemical Essays*, vol. v., pp. 1-42 (1787).
- 5 WILLEN, R.—Observations on the Sulphur-Water at Croft, etc. [See under 1782].

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- 1 ANON (signed E. H. and D. H. Letters *re* Devil's Arrows, etc., at Borough-bridge). *Gentleman's Magazine*. Part II. Pp. 564-5, and 659-60.
- 2 ANON [J. SCHOFIELD].—An Historical and Descriptive Guide to Scarborough and its Environs. The Spaw, pp. 21-30]. Pp. viii., 192. 8vo, York.
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- 4 ROOKE, H.—Some account of the Brimham Rocks in Yorkshire. *Archæologia*, vol. viii., pp. 209-217. Pls. xvi., xvii. Also 4to, reprint. London.
- 5 SCHOFIELD, J.—[See Anon.].
- 6 WATSON, R.—Of water in a solid state; of the best spring water; and of a probable cause of the impregnation of sulphureous waters. [Harrogate, pp. 193-205]. *Chemical Essays*, vol. iii., pp. 171-205.
- 7 — [See under 1781].

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- 3 MARSHALL, W.—The Rural Economy of Yorkshire [Soils etc., p. 268. Hill shaded map]. 2 vols. 8vo. *London* Pp. 1-413 and 1-372. Another Ed., 1818.

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- 2 HARGROVE, E.—The History of . . . Knaresborough, . . . etc. Ed. 4. [See under 1769].
- 3 WATSON, R.—Chemical Essays and Observations on the Sulphur Wells at Harrogate, Springs in Yorkshire]. 12mo.

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- 2 GARNETT, T.—Experiments and Observations on the Horley-Green Spaw, near Halifax. To which is added a Short Account of Two Other Mineral Waters in Yorkshire. [Redmire Spaw on Romald-Moors. and at Batley]. Pp. 86. 8vo. *Bradford.*

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- 1 GARNETT, T.—Experiments and Observations on the Crescent Water at Harrogate. Pp. 69. 8vo. *Leeds.* See also under 1794.
- 2 SMEATON, J.—A Narrative of the Building and a Description of the Construction of the Edystone Lighthouse with Stone: with which is subjoined an appendix* giving some account of the Lighthouse on the Spurn Point built upon a Sand. [Account of well, p. 190]. Fol. *London.* Ed. 2, 1813.

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- 1 GARNETT, T.—A Treatise on the Mineral Waters of Harrogate, containing the History of the Waters, their Chemical

* I have the original MS. and drawings for this section of the work.—T.S.

Analysis, Medicinal Properties and Plain Directions for their use. Pp. 168. 8vo. *Bradforth*. Ed. 2. Pp. xii., 163. 8vo. *Leeds*, 1794. Ed. 4, with appendix by J. JAQUES, *Leeds*, 1804. Ed. 5. 8vo. *Knaresborough*, 1810. Ed. 7. Pp. 224. 12mo. *Knaresborough*, 1822. Ed. 8 [1829].

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- 1 BROUN, R.—[See G. Rennie].
- 2 GARNETT, T.—A Treatise on the Mineral Waters at Harrogate. Ed. 2. [See under 1792].
- 3 LEATHAM, T.—General View of the Agriculture of the East Riding of Yorkshire and the Ainsty of the City of York, with Observations on the means of its improvement drawn up for the consideration of the Board of Agriculture and Internal Improvement. [Small map and account of soils]. Pp. 68. 4to. *London*.
- 4 RENNIE, G., R. BROUN, and J. SHIRREFF.—General View of the Agriculture of the West Riding of Yorkshire, with observations on the means of its improvement. [Map and account of soils]. Pp. 140. 4to. *London*. Ed. 2. 8vo. 1799.
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- 1 ANON.—The Scarborough Guide (a second edition), to which is prefixed a descriptive route through Hull and Beverley. . . . [General Account of Scarborough Spaw Waters by Dr. BELCOMBE, pp. 53-59. Natural Productions by W. TRAVIS, pp. 113-119]. Pp. 178. 8vo. *Hull*. Ed. 1, 1787? Ed. 3, 1808.
- 2 BELCOMBE, —.—[See under 'Anon'].

- 3 BREWSTER, J.—The Parochial History and Antiquities of Stockton-upon-Tees. . . . Soils, pp. 104, 105. Pp. 176. 4to. *Stockton*. Ed. 2. 8vo. *Stockton*, 1829.
- 4 TICKELL, J.—The History of the Town and County of Kingston-upon-Hull, from its foundation in the Reign of Edward I. to the present time, with a description of the adjacent country. 4to. Pp. 940.
- 5 TRAVIS, W.—[See under 'Anon'].
- 6 OUTRAM, B.—Particulars of the Discovery of some very singular Balls of Stone, found in the Works of the Huddersfield Canal. [Limestone nodules in the tunnel at Pule Hill, near Marsden]. *Phil. Trans.*, vol. lxxxii., pp. 350-352.

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- 2 HARGROVE, E.—The History of . . . Knaresborough, etc. Ed. 5. [See under 1769].
- 3 HINDERWELL, T.—The History and Antiquities of Scarborough and the Vicinity, with Views and Plans. [Alum Works, pp. 265, 266, 268. Fossils, by W. TRAVIS, pp. 213-215. Mineral Waters, by Dr. BELCOMBE, pp. 173, 182-191]. Pp. xi., 352. 4to. *York*. Ed. 2. 8vo. *London*, 1811. Ed. 3, by B. EVANS. 8vo. *Scarborough*, 1832.
- 4 TRAVIS, W.—[See under T. Hinderwell].

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- 1 ALDERSON, J.—Geological Observations on the Vicinity of Hull and Beverley. *Journ. Nat. Phil. Chem. and Arts*, vol. iii., pp. 285-288.
- 2 BROUN, R.—[See G. Rennie].
- 3 CARY, G.S.—The Balnea: a description of all the popular watering places. 12mo.
- 4 GARNETT, THOMAS. Experiments and Observations at the Horley-Green-Spaw, near Halifax. To which is added a short account of two other mineral waters in Yorkshire. 8vo. Pp. 86
- 5 RENNIE, G.; BROUN, R.; and SHIRREFF, J.—General View of the Agriculture of the West Riding of Yorkshire. [See under 1794].

- 6 KIRWAN, R.—An Essay on the Analysis of Mineral Waters. [Discusses Dr. Garnett's analysis of Harrogate sulphur water, p. 137]. 8vo. *London*.
- 7 TENNANT, SMITHSON.—On different Sorts of Lime used in Agriculture. [Magnesian Limestone]. *Phil. Mag.*, vol. v., pp. 209-216; *Journ. de Phys.*, vol. li., pp. 156-163, 1800; also Geological Essays by A. Hunter. *Essay xix.*, vol. iv., pp. 371-385. 8vo. *York*, 1803.
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- 2 TENNANT, SMITHSON.—On Different Sorts of Lime used in Agriculture. [See under 1799].
- 3 TUKE, J.—General View of the Agriculture of the North Riding. Ed. 2? [See under 1794].
- 4 SAUNDERS, W.—A Treatise on the Chemical History and Medicinal Powers of some of the most celebrated Mineral Waters; with practical remarks on the aqueous regimen. [Harrogate, pp. 405-418], 8vo. *London*. Ed. 2, 1805.

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- 1 ANON.—The History of Ripon. [See under 1806]

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- 1 HUNTER, K.—[See under Smithson Tennant].
- 2 TENNANT, SMITHSON.—On different Sorts of Lime used in Agriculture. Also Geological Essays, by A. Hunter. [See under 1799].

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- 1 GARNETT, T.—A Treatise on the Mineral Waters of Harrogate, with appendix by J. Jaques. [See under 1792].
- 2 JAQUES, J.—[See T. Garnett].
- 3 MILLER, E.—The History and Antiquities of Doncaster and its Vicinity. [Stone quarries, gypsum, minerals, etc., pp. 9-11]. 4to. *Doncaster*.
- 4 PARKINSON, J.—Organic Remains of a Former World. An

Examination of the mineralized remains of the Vegetables and Animals of the antediluvial World, generally termed extraneous fossils. [Yorkshire, vol. ii., pp. 17, 61, 169, 259]. 3 vols. 4to. *London*, 1804-11.

- 5 PENNANT, T.—A Tour from Alston Moor to Harrowgate and Brimham Crags. [Views of Brimham]. 4to. *London*.
- 6 SOWERBY, J.—British Mineralogy: or, coloured figures intended to elucidate The Mineralogy of Great Britain. 5 vols. 8vo. *London*, 1804-1807: Vol. i., 1804, Yorkshire, pp. 58, 65; vol. ii., 1806, Yorkshire, pp. 2*, 7*, 18*, 19*, 15, 49, 81; vol. iii., 1809, Yorkshire, pp. 35, 67, 95, 185; vol. iv., 1811, Yorkshire, pp. 47, 63; vol. v., 1817, Yorkshire, pp. 3, 13, 27, 75, 86.
- 7 SMITH, C.—A New Map of Yorkshire. [Scale about 3 miles to an inch].

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- 1 BLIGH, W.—A Survey of the Humber. From the Spurn to the Western end of Sunk Island in February, 1797. *Admiralty Chart*, 1805.
- 2 SANDERS, W.—A Treatise on the Chemical History . . . of . . . Mineral Waters. Ed. 2. [See under 1800].
- 3 PEACOCK, J.—Observations upon the Composition and Uses of the Water at the New Sulphur Baths at Dinsdale, near Darlington. 8vo. *London and Newcastle*, 1805 and 1829.
- 4 SHEFFIELD, W. E.—[See T. D. Whitaker].
- 5 WHITAKER, T. D.—The History and Antiquities of the Deanery of Craven in the County of York. Appendix ii., p. 12. Catalogue of Minerals found in Craven, by W. E. SHEFFIELD. 4to. *London*. Ed. 2. 1812. Ed. 3, 1878.

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- 1 ANON.—The History of Ripon : with descriptions of Studley-Royal, Fountains Abbey, Newby, Hackfall, etc., etc. An analysis of Aldfield Spaw and lists of Rare indigenous plants found in the neighbourhood. [Aldfield Spa and Brimham Rocks]. Ed. 2. Pp. 314. 12mo. *Ripon*. Ed. 1, 1801, does not refer to Aldfield.
- 2 AINSWORTH, W.—The Scarboroug Guide (sic). (Edition 3), containing an accurate description of the Town, Castle,

and Environs ; Dr. Belcombe's observations on The Spaw-Waters and Sea-Bathing ; . . . [Spaw-Waters by W. BELCOMBE, pp. 21-29. Natural Productions by W. TRAVIS, pp. 94-103]. 16mo. York. Ed. 4. 16mo. York, 1811. Ed. 5. 12mo. Scarborough [1812 ?]. Ed. 7. 8vo. Scarborough, 1832. Ed. 8. 8vo. Scarborough, 1840.

- 3 BELCOMBE, W.—[See W. Ainsworth].
- 4 HUNTER, ADAM.—Lecture on the Sulphur Water of Harrogate. 8vo. York.
- 5 TRAVIS, W.—[See W. Ainsworth].
- 6 SOWERBY, J.—British Mineralogy, vol. ii. [See under 1804].

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- 1 RIBBLESDALE, LORD.—Three Letters giving an Account of a Mine of Zinc Ore, found in caverns at Mallam Moors, and its application as a Paint. *Trans. Soc. Arts.*, vol. xxv., pp. 35-38

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- 1 ANON.—The Scarborough Guide. Ed. 3. [See under 1796].
- 2 GRAVES, J.—The History and Antiquities of Cleveland. [Geology, pp. 71-80, and map]. 4to. Carlisle. Another Ed., 1846. 4to. London.
- 3 MARSHALL, W.—A Review of the Reports of the Board of Agriculture of England : comprising . . . [Account of soils, pp. 338, 430 ; Fossils, pp. 338, 434 ; Minerals, pp. 338, 436. Small map of northern counties showing main geological divisions]. 8vo. York.
- 4 RIBBLESDALE, LORD.—Account of a Mine of Zinc Ore, and its application as a Paint. [From a mineral found in caverns at Mallam Moors]. *Journ. Nat. Phil. Chem. Arts*, ser. 2, vol. xxi., No. 91, pp. 12-14. [See under Lord Ribblesdale, 1807].

1809.

- 1 CAYLEY, G.—Synoptical Tables, showing the component parts of the Principal Mineral Waters, collected from the Works of Doctor Saunders, Doctor Garnett, Mr. Peacock, of Darlington, and the late Mr. William Brunton of Ripon ; with some observations addressed to the Medical Faculty and to the Public. 8vo. Ripon.

- 2 FORSTER, W.—A Treatise on a Section of the Strata commencing near Newcastle upon Tyne and concluding on the West Side of Cross Fell. With remarks on Mineral Veins in general. . . . To which are added Tables of the Strata in Yorkshire and Derbyshire. . . . [Swaledale, Cleveland]. Pp. 156. 8vo. *Newcastle*. Ed. 2. Pp. 422+xvi., 8vo. *Alston*, 1821. Ed. 3. Pp. lvi.+208 by W. NOLL. [?date]. 8vo. *Newcastle and London*.
- 3 HARGROVE, E.—A History of . . . Knaresborough, etc. Ed. 6. [See under 1769].
- 4 SOWERBY, J.—British Mineralogy. Vol. iii. [See under 1804].

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- 1 FAREY, J.—On the supposed Fresh-water Origin of the Gypsum Strata in the Environs of Paris; on the Geological Characters and Relations of the Alum Shales on the Northern Coasts of Yorkshire. . . *Phil. Mag.*, vol. xxxv., pp. 256-261.
- 2 —— A List of about Five Hundred Collieries in and near to Derbyshire. [Yorkshire Collieries working at this date]. *Ibid.*, pp. 431-438.
- 3 GARNETT, T.—A Treatise on the Mineral Waters of Harrogate. Ed. 5. [See 1792].
- 4 WINTER, R.—A mineralogical Outline of the District containing the Aluminous Schistus, in the County of York, with the entire Process practised in the Manufactory of Alum: to which is added an Analysis of the Sulphate of Alumine, and the Supersulphate of Alumine and Potash, with practical Observations and Remarks. [Analyses, and other minerals]. *Journ. Nat. Phil. Chem. Arts*, vol. xxv., No. 114, pp. 241-257.

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- 1 AINSWORTH, W.—The Scarborough Guide. Ed. 4. [See under 1806]
- 2 FAREY, J.—A List of about 280 Mines of Lead—some with Zinc, Manganese, Copper, Iron, Fluor, Barytes, etc. in and near to Derbyshire. [Yorkshire, p. 107]. *Phil. Mag.*, vol. xxxvii., pp. 106-111.
- 3 —— A List of about 700 Hills and Eminences in and near

to Derbyshire, with the Stratum which occupies the top of each, and other Particulars. [Many Yorkshire]. *Ibid.* Pp. 161-175, 443.

- 4 HINDERWELL, T.—The History and Antiquities of Scarborough. Ed. 2. [See under 1798].
- 5 SOWERBY, J.—British Mineralogy. Vol. iv. [See under 1804].

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- 1 ANON (F. O. E.)—On Gypsum near Doncaster, and Nodules of Limestone, and of Pyrites containing Sea Shells in the Coal District near Bradford in Yorkshire. *Phil. Mag.*, vol. xxxix., p. 352.
- 2 AINSWORTH, W.—The Scarborough Guide. Ed. 5. [See under 1806].
- 3 BIGLAND, J.—The Beauties of England and Wales: or, Original Delineations, Topographical, Historical and Descriptive of each county. [Harrogate, vol. xvi., pp. 652-655; Boroughbridge, p. 665, etc.]. 8vo. *London*.
- 4 COOKE, G. A.—Topographical and Statistical Description of the County of York, containing an Account of its . . . Mines, Minerals . . . Being vol. xx. of 'The Modern British Traveller.' 16mo. *London*.
- 5 E., F. O.—[See 'Anon'].
- 6 FAREY, J.—An Account of the Great Derbyshire Denudation. [Yorkshire as far north as Wetherby. Small map showing faults]. *Phil. Mag.*, vol. xxxix., pp. 26-35.
- 7 — Geological Observations, in Correction of and Addition to the Paper on the Great Derbyshire Denudation, in our last, and the Report on Derbyshire, etc.; relating principally to Coal-measures near to the Chalk Strata; the Course of the 3rd and 4th Grit Rocks and Crowstone through Yorkshire, and the termination of its Coal-field Northward: the Limits of the Yellow Lime Rock, and the Existence of Red Marl, Gypsum Beds, Strontian, etc., between its Rocks, etc., etc. *Phil. Mag.*, vol. xxxix., pp. 93-106.
- 8 — (A Letter in reply to M. De Luc). [Plant remains in the Coal near Wakefield, p. 516]. *Monthly Mag.*, vol. xxxiii., pp. 513-517

- 9 HUTTON, J.—A Tour to the Caves . . . of Ingleborough.
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- 10 SOWERBY, J.—The Mineral Conchology of Great Britain.
Vols. i., ii., iii., iv., 1812-1823, continued by J. D. C.
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- 11 STRICKLAND, H. E.—A General View of the Agriculture of
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- 12 [WEST, T.]—A Guide to the Lakes in Cumberland, West-
moreland and Lancashire, by the author of the Antiquities
of Furness. [See under Hutton, 1781].
- 13 WHITAKER, T. D.—The History . . . of Craven . . .
[See under 1805].

1813.

- 1 FAREY, J.—Cursory Geological Observations lately made,
in Shropshire, Wales, Lancashire, Scotland, Durham,
Yorkshire N.R., and Derbyshire. Some Observations on
Mr. Bakewell's Geological Map, and on the supposed
Identity of the Derbyshire Peak and the Craven Lime-
stone Rocks, etc., etc. *Phil. Mag.*, vol. xlii., pp. 53-59.
See also, pp. 103-106, 121-126, 164-171, 246-261, 356-367.
- 2 GOUGH, J.—Observations on the Ebbing and Flowing Well
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a Theory of reciprocating Fountains. *Journ. Nat. Phil.
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Soc., Manchester*, ser. ii., vol. ii., pp. 354-383.
- 3 SMEATON, J.—A Narrative of the Building . . . of the
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1791].
- 4 TOWNSEND, J.—The Character of Moses established for
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- 1 ANON.—The New Harrogate Guide: Being a concise Description and History of what is most remarkable in that neighbourhood, for Antiquity, Elegance, or Rural Beauty: including Almias Cliff, Boroughbridge, Brimham Rocks, Hackfall, Knaresborough, Plumpton, etc. 12mo. Pp. 135. *Harrogate and Knaresborough.* Ed. 3, 1822. Ed. 5, 1828. Ed. 6, 1833.

- 2 FAREY, J.—Short Notices of Geological Observations made in the Summer of 1814, in the South of Yorkshire, and in North Wales, and of some Inferences therefrom, as to the Structure of England and Wales. *Phil. Mag.*, vol. xlv., pp. 161-177.

- 3 —— An alphabetical Arrangement of the places from whence Fossil Shells have been obtained, by Mr. James Sowerby, and drawn and described in vol. i., of his ‘Mineral Conchology’; with the geographical and Stratigraphical Situations of those Places, and a List of their several Fossil Shells, etc. *Ibid.*, vol. xlvi., pp. 211-224.

- 4 MURRAY, J.—An Analysis of the Mineral Waters of Dunblane and Pitcaithly; with general Observations on the Analysis of Mineral Waters, and the Composition of Bath Water and some others. [Harrogate, p. 487]. *Trans. Roy. Soc., Edinb.*, vol. vii., pp. 445-493; *Ann. Chim.*, t. xcvi., pp. 217-288; *Ann. Phil.*, vol. vi., pp. 256-269, 347-363; *Phil. Mag.*, vol. xlvi., pp. 264-278; *N. Journ. Pharm. Aerzt. Apoth. Chem.*, bd. ii., pp. 387-412 (1818).

- 5 SMITH, W.—A Delineation of the Strata of England and Wales, with parts of Scotland; exhibiting the Collieries and Mines, the Marshes and Fen Lands originally overflowed by the sea, and the Varieties of Soil according

to the variations in the substrata illustrated by the most descriptive names. Scale 5 miles to one inch.

- 6 SMITH, W.—Geological Table of British Organised Fossils which identify the courses and continuity of the Strata in their order of superposition as originally discovered by W. Smith, Civil Engineer, with reference to his Geological map of England and Wales.
- 7 —— A Memoir to the Map and Delineation of the Strata of England and Wales, with part of Scotland. [General account of Yorkshire, pp. 33-35]. 4to. *London*.
- 8 STORER, J.—On an Ebbing and Flowing Well discovered by boring in the harbour of Bridlington. *Phil. Trans.*, vol. cv., part 1, pp. 54-59. *Phil. Mag.*, vol. xlv., p. 432.
- 9 TOWNSEND, J.—The Character of Moses, etc. [See under 1813].

1816.

- 1 ANON [N. J. WINCH].—Answer to the Geological Queries of a Constant Reader (in previous No., p. 12). [Refers to coal worked at Easingwold]. *Phil. Mag.*, vol. xlvi., pp. 100, 101.
- 2 —— [F. KENDALL].—A Descriptive Catalogue of the Minerals, and Fossil Organic Remains of Scarborough and the Vicinity. 8vo. 317 pp. *Scarborough*.
- 3 HUME, —.—Analysis of the Water from the Ebbing and Flowing Stream discovered by boring in the Harbour at Bridlington, A.D. 1811, by Mr. Hume. *London*. December, 8vo. Pp. 8.
- 4 KENDALL, F.—[See 'Anon.']
- 5 STEVENSON, R.—Observations upon the Alveus, or General Bed of the German Ocean and British Channel. [Erosion of the Yorkshire Coast, pp. 479, 480]. *Mem. Wernerian Soc.*, vol. ii., for 1811-1816, pp. 464-490; *Ann. Phil.*, vol. viii., pp. 173-182. ; *Phil. Mag.*, vol. xlix., pp. 414-419 (1817).
- 6 WHITAKER, T. D.—Ducatus Leodiensis, and Loidis and Elmete. History and Topography of Leeds and Parts adjacent. 2 vols. Folio.
- 7 WINCH, N. J.—[See 'Anon']

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- 2 — The Tourist's Companion ; being a Concise Description and History of Ripon, Studley Park, Fountains Abbey, Hackfall, Brimham Crags, Boroughbridge, Aldborough, Newby Hall, Knaresborough, Plumpton, Harrogate, and Harewood House. [Harrogate, Analyses of waters, pp. 93-97 ; Devil's Arrows, pp. 59-62]. 16mo. *Ripon*. Ed. 3, 1822 ; Ed. 5, 1828 ; Ed. 6, 1833. Copyright purchased in 1841, and re-issued under new title. [See Anon (J. R. Walbran), 1841].
- 3 — The Ebbing and Flowing Stream in the Harbour of Bridlington, Yorkshire. *Phil. Mag.*, vol. xlix., p. 230.
- 4 — (W. S.).—On the Ebbing and Flowing Springs. *Ibid.*, vol. 1., pp. 267-269.
- 5 BIRD, J.—[See G. Young.].
- 6 INGLIS, G.—On the Cause of Ebbing and Flowing Springs [Bridlington]. *Ibid.*, pp. 81-83.
- 7 MURRAY, —.—[Sulphate of Strontia in the banks of the Nidd, near Knaresborough]. *Trans. Geol. Soc.*, vol. iv., p. 445.
- 8 SMITH, W.—Stratigraphical System of Organized Fossils, with reference to the specimens of the Original Geological Collection in the British Museum, explaining their state of preservation and their use in identifying the British Strata. [Whitby, pp. 55, 56]. Pp. i., 118. 4to. *London*.
- 9 SOWERBY, J.—British Mineralogy. Vol. v. [See under 1804].
- 10 STEVENSON, R.—Observations upon the . . . bed of the German Ocean, etc. [See under 1816].
- 11 SUTCLIFFE, J.—A Short Introduction to the Study of Geology ; comprising a new theory of the elevation of the mountains, and the stratification of the earth : in which

the Mosaic Account of the Creation and the Deluge is vindicated. [Yorkshire, pp. 19, 22, 31, 38, 39]. 8vo. *London.*

- 12 YOUNG, G.—A History of Whitby and Streoneshalh Abbey, with a statistical Survey of the vicinity to the distance of Twenty-five Miles. [Mineralogy mostly by J. BIRD, vol. ii., pp. 769-792]. 2 vols. 4to. *Whitby.*

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- 1 ANON, W. S.—Live Lizard found imbedded in a seam of coal.—Fossil Tree.—Fossil Plants. [Near Wakefield]. *Phil. Mag.*, vol. lii., pp. 377, 378.
- 2 BIRD, J.—[See G. Young].
- 3 BREWERTON, T. LE GAY.—A Treatise on the Mineral Waters of Askern including a Description of the Village, History of the Spaws, etc. Pp. iii., 144. 8vo. *Doncaster.*
- 4 FITTON, W. H.—[A review of the Geological Map and other works of William Smith]. *Edin. Rev.*, Feb., 1818. Vol. xxix., pp. 311-337. See also 1832.
- 5 HARGROVE, W.—History and Description of the Ancient City of York; comprising all the most interesting information, already published in Drake's Eboracum; enriched with much entirely new matter, from other authentic sources, and illustrated with a Neat Plan of the City, and many Elegant Engravings. [Account of the old waterworks, vol. ii., p. 452]. 2 vols. 8vo. *York.*
- 6 MARSHALL, W.—The Review and Abstracts of the County Reports of the Board of Agriculture from the several agricultural departments of England. 8vo. *York.*
- 7 —— [See 1788].
- 8 MURRAY, J.—An Analysis of . . . Mineral Waters. . . . [See under 1815].
- 9 SOWERBY, J.—The Mineral Conchology of Great Britain. Vol. i. [See under Sowerby, J., 1812].
- 10 STEINHAUER, H.—On Fossil Reliquia of unknown Vegetables in the Coal Strata. [Leeds, Bradford, Low Moor, pp. 269-273, 293]. *Trans. American Phil. Soc.*, vol. i., pp. 265-297.
- 11 YOUNG, G., and J. BIRD.—Geological and Mineralogical Survey of Part of the Yorkshire Coast. Drawn up by

Rev. G. Young, from Materials chiefly furnished by Mr. J. Bird. *Phil. Mag.*, vol. li., pp. 206-214.

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- 1 BIGLAND, JOHN.—A Topographical and Historical Description of the County of York [being part of the work lately completed, 'The Beauties of England and Wales']. *London.* 8vo. Pp. viii. + 958.
- 2 FAREY, J.—On the Importance of knowing and accurately discriminating Fossil-Shells, as the means of identifying particular Beds of the Strata, in which they are inclosed : with a list of 279 Species or Varieties of Shells, of which the several Stratigraphical and Geographical Localities are mentioned. . . . [A few Yorkshire species]. *Phil. Mag.*, vol. liii., pp. 112-132.
- 3 —— Free Remarks on the Geological Work of Mr. Greenough. [Speeton Cliffs, p. 129]. *Ibid.* Vol. liv. Pp. 127 132.
- 4 —— A Stratigraphical or Smithian Arrangement of the Fossil Shells, which were described (in Latin) by Martin Lister in 1678, in the 3rd Tract of his 'Historiæ Animalium Angliæ,' occupying there 78 pages of very small quarto, with 4 plates, containing 64 Figures of Shells. *Ibid.* Pp. 133-138.
- 5 HUNTER, ADAM.—An Essay on Two Mineral Springs recently discovered at Harrogate ; and on the Springs of Thorpe-arch and Ilkley ; including the history, chemical analysis, and medicinal properties of these waters, with some observations on their use. Pp. iv., 134. 8vo. *Leeds and London.*
- 6 MACKENZIE, P.—Practical Observations on the Medical Powers of the most celebrated Mineral Waters, and of the various modes of Bathing. Pp. 151. 12mo. *London.*
- 7 YOUNG, G.—[Letter, on] the Discovery of Fossil Remains [*Ichthyosaurus?*] near Whitby. (Geol. Soc.), *Ann. of Phil.* Vol. xiii. P. 379.

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- 1 ANON.—Aire and Calder Canal. An Act to enable the Aire and Calder Navigation to make a Canal from Knottingley to Goole.

- 2 SCUDAMORE, C.—A Chemical and Medical Report of the Properties of the Mineral Waters of Buxton, Matlock, Tunbridge Wells, Harrogate, Bath, Cheltenham, Leamington, Malvern, and the Isle of Wight. [Harrogate, pp. 90-126]. Pp. ix., 265. 8vo. *London*. Ed. 2. Under different title. Pp. xi., 215. 8vo. *London*.
- 3 SMITH, W.—A New Geological Map of England and Wales with the Inland Navigations; exhibiting the districts of Coal and other Sites of Mineral Tonnage. Scale about 12 miles to one inch. Another Ed., 1828. Scale 15 miles to one inch.
- 4 STEVENSON, R.—On the Bed of the German Ocean or North Sea. [Shoaling of the sea]. *Edin. Phil. Trans.*, vol. iii., pp. 42-56, map; *Mem. Wernerian Soc.*, vol. iii., pp. 314-336 (1821).
- 5 WILLIAMS, J. W.—An Essay on the Utility of Sea Bathing, In preserving Health, and as a Remedy in Disease. . . . Also Observations on Mineral Waters, Natural and Artificial. [Harrogate, p. 221]. 12mo. *Portsmouth*.

1821.

- 1 FORSTER, W.—A Treatise on a Section of the Strata . . . near Newcastle-upon-Tyne. Ed. 2. [See under 1809].
- 2 HARGROVE, E.—A History of . . . Knaresborough, etc. [See under 1769].
- 3 JEFFERSON, J. B.—The History of Thirsk; including an account of its once celebrated Castle, Topcliffe, Byland, and Rievaulx Abbey, etc., etc. [Alludes to fossils, etc., p. 70]. 8vo. *Thirsk*.
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- 5 MILLER, J. S.—A Natural History of the Crinoidea or Lily-shaped Animals, with observations on the genera Asteria, Euryale, Comatula, Marsupites, illustrated with Fifty coloured plates. [Yorkshire species, pp. 68, 95, 116]. 4to. *Bristol*.
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- 3 — Geology of England and Wales (many interesting references to Yorkshire). 12mo. *London*. E. Grettan, with folding Geological map in colours, by Gilbert.

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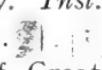
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- 13 SMITH, WILLIAM.—[See Charles Barry].
- 14 WALKER, J. K.—Some Observations on certain supposed Druidical Remains in the County of York (near Knaresborough, etc.). *Gentleman's Magazine*, part 1, pp. 133-140. (See also 1840].

- 15 WEATHERHEAD, W.—The History of Netherdale from the times of the Ancient Britons to the Present Time, giving an account of the Most Remarkable Things, as the Lead Mines and other Minerals . . . Brimham Rocks, etc. Pp. 56. 12mo. *Leeds*.
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- 4 ALEXANDER, W.—The Horley Green Mineral Water: its new chemical analysis and medical uses. 8vo. *London*.
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- 15 POULSON, G.—The History and Antiquities of the Seigniory of Holderness, in the East Riding of the County of York. . . . 2 vols. 4to. *Hull*. [Contains J. Tuke's Map of Holderness, 1786, showing distances of villages from the sea].
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- 17 SIMPSON, MARTIN.—Geology of the Whitby District. Report of a Lecture delivered before the Whitby Literary and Philosophical Society *Whitby*. 12mo. Pp. 12. [n.d. ? 1840].
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- 19 SMITH, C. H.—Lithology; or, Observations on Stone used for Building. Part. 1, Treating chiefly of the Sandstones. Pp. 40. 1840. Part 2, Treating chiefly of the Magnesian Limestones of Yorkshire, Derbyshire and Nottinghamshire, with reference to the selection of stone for building the exterior of the New Houses of Parliament. Pp. 36. 1844. 4to. *London*. Part 1, also *Trans. Roy. Inst. British Arch.*, vol. i., part 1, pp. 129-168, 1842. 
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- 2 —— [J. ALLEN].—The Stranger's Guide to Ferriby, Welton, Elloughton, and South Cave, in the East Riding of the County of York. 8vo. *Hull and London*.
- 3 ALEXANDER, W.—On the Mineral Springs of the Parish of Halifax, geologically considered. [List of Fossils from the Limestone Shale of the Vale of Todmorden, by J. GIBSON, pp. 166-168]. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 148-171.
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- 14 HOLT [H.]—[See (T. W.) Embleton].
- 15 JAMES, J.—The History and Topography of Bradford (in the County of York), with Topographical Notices of its Parish. [Geological Notes, pp. 9-12]. Pp. x., 444. 8vo. *London* and *Bradford*. Continuation see 1866.
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- 19 MORTON [C.]—[See (T. W.) Embleton].
- 20 OWEN, R.—A description of a portion of the skeleton of the Cetiosaurus, a gigantic extinct Saurian Reptile occurring in the Oolitic formations of different portions of England. [Scarborough]. *Proc. Geol. Soc.*, vol. iii., pp. 457-462.
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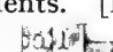
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- 1 THORP, W.—‘Geological Diagram of the Yorkshire Coal Field.’ The above title appears on the leather covering of a diagram 5½ feet long by 2 feet wide. The upper part is described “Diagram connecting the several coal beds in the Yorkshire coal field from north to south, and exhibiting their relative number, thickness and identity.” This section begins at Thorner, crosses the Calder valley at Allerton Bywater, passes Glass Houghton, Pontefract, Melton Park, the Don Valley, and on into Derbyshire. The lower one is headed “2nd Diagram which is a continuation downwards of the upper diagram, to lower strata and over a more western line of country.” This shows a section from the river Aire at Armley, past Gomersal, Stainbro’ Park, and on into Derbyshire. The scale of the section is 60 yards to the inch vertical, 1 inch to the Mile horizontal.
Bound up with my copy, and evidently part of the same scheme, is a “Vertical Section across the Yorkshire coal field from east to west.” Vertical scale 120 yards to the inch, horizontal scale 2 miles to the inch. This diagram measures 3 feet 6 inches by 8 inches.*

* There is no date to these plans, but judging from information in the Proceedings of the Yorkshire Geological etc. Society, the date is about 1847. T.S.

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- 88 N.E.—Halifax, Huddersfield, by A. H. GREEN, J. R. DAKYNS, J. C. WARD, and R. RUSSELL. Solid only, 1874.
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- 88 S.E.—Penistone, by A. H. GREEN, J. R. DAKYNS, and J. C. WARD. Solid only, 1868.
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- [93 N.E. [N.S. 63].—York, by C. FOX-STRANGWAYS. Solid, 1882.

SHEET

- 93 S. W. [N.S. 70].—Leeds, Wetherby, by W. T. AVELINE, J. C. WARD, J. R. DAKYNS, R. RUSSELL, 1870. Revised by J. LUCAS. Solid only, 1873.
- 93 S.E. [N.S. 71].—Selby, Pocklington, by J. R. DAKYNS, C. FOX-STRANGWAYS, and A. C. C. CAMERON. Solid only, 1885.
- 94 N.W. [N.S. 64].—Driffield, by J. R. DAKYNS, and C. FOX-STRANGWAYS. Solid, 1884.
- 94 N.E. [N.S. 65].—Bridlington, by J. R. DAKYNS, and C. FOX-STRANGWAYS. Solid, 1882.
- 94 S.W. [N.S. 72].—Market Weighton, Beverley, by J. R. DAKYNS and C. FOX-STRANGWAYS. Solid, 1884.
- 94 S.E. [N.S. 73].—(See New Series, below).
- 95 N.W. [N.S. 44].—Scarborough, Robin Hood's Bay, by C. FOX-STRANGWAYS, and G. BARROW. Solid, 1881.
- 95 S.W. [N.S. 54].—Scarborough, Filey, by C. FOX-STRANGWAYS. Solid, 1881.
- 95 S.E. [N.S. 55].—Speeton, Flamborough Head, by C. FOX-STRANGWAYS. Solid, 1881.
- 96 N.W. [N.S. 42].—Northallerton, Stokesley, by H. H. HOWELL, C. FOX-STRANGWAYS, G. BARROW, and A. C. G. CAMERON. Solid, 1883.
- 96 N.E. [N.S. 43].—Grosmont, Rosedale Abbey, by C. FOX-STRANGWAYS, C. REID, and G. BARROW. Solid, 1883.
- 96 S.W. [N.S. 52].—Thirsk, Ripon, by H. H. HOWELL, C. FOX-STRANGWAYS, G. BARROW, and A. C. G. CAMERON. Solid, 1884.
- 96 S.E. [N.S. 53].—Malton, Helmsley, Pickering, by C. FOX-STRANGWAYS. Solid, 1882. New edition, 1908.
- 97 N.W. [N.S. 40].—Muker, Askrigg, by T. MC K. HUGHES, J. R. DAKYNS, R. H. TIDDEMAN, R. RUSSELL, J. C. GOODCHILD, C. E. DE RANCE, C. T. CLOUGH, A. STRAHAN, G. BARROW. Solid and Drift, 1889.
- 97 N.E. [N.S. 41].—Richmond, by W. GUNN, J. G. GOODCHILD, G. BARROW. Solid and Drift, 1889.
- 97 S.W. [N.S. 50].—Ingleton, Hawes, Kettlewell, by T. MC K. HUGHES, J. R. DAKYNS, R. H. TIDDEMAN, C. FOX-STRANGWAYS, W. GUNN, J. G. GOODCHILD, A. STRAHAN. Solid and Drift, 1889.

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- 97 S.E. [N.S. 51].—Masham, Aysgarth, by J. R. DAKYNS, L. LUCAS, W. H. DALTON, J. C. GOODCHILD, and W. GUNN. Solid only, 1879.
- 98 N.E. [N.S. 39].—Sedbergh, by T. Mc K. HUGHES and J. G. GOODCHILD. F. RUTLEY, G. H. WOLLASTON, G. H. LIGHTFOOT, 1871. Additions by J. R. DAKYNS, E. J. HEBORT, 1879. Revised by R. H. TIDDEMAN, A. STRAHAN. Drift edition, 1887.
- 98 S.E. [N.S. 49].—Burton in Lonsdale, Moors S. of Sedburgh, by W. T. AVELINE, T. Mc K. HUGHES, and R. H. TIDDEMAN, 1869. Revised by A. STRAHAN, G. BARROW, 1892.
- 102 N.E. [N.S. 25].—Cronkley Scar, by D. BURNS, W. GUNN, and C. T. CLOUGH. Solid and Drift, 1883.
- 102 S.E. [N.S. 31].—Lune Forest, Cotherstone Moor, by W. T. AVELINE, T. Mc K. HUGHES, J. R. DAKYNS, R. H. TIDDEMAN, R. RUSSELL, W. H. DALTON, W. GUNN, J. G. GOODCHILD, and C. T. CLOUGH. Solid and Drift, 1893.
- 103 S.W. [N.S. 32].—Barnard Castle, Bowes, by H. H. HOWELL and W. GUNN, 1881. Drift edition, 1883. Revised, 1889.
- 103 S.E. [N.S. 33].—Middlesbrough, by H. H. HOWELL, A. C. G. CAMERON, and G. BARROW, 1880.
- 104 S.W. [N.S. 34].—Redcar, Guisborough, by G. BARROW, 1880.
- 104 S.E. [N.S. 35].—Whitby, by G. BARROW, 1880.

NEW SERIES : DRIFT EDITION. Printed in Colours.

The maps enumerated below were originally issued hand-coloured; these are now withdrawn. Their numbers in the Old Series and date of publication are given after each New Series map. No Colour-printed, Solid Edition, has yet been published of any of the Yorkshire maps.

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- 33—Middlesbrough, 1910. O.S. 103 S.E., 1883.
- 34—Redcar, Guisborough, 1909. O.S. 104 S.W., 1883.
- 35—Whitby (inset in 44), 1909. O.S. 104 S.E., 1881.

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- 42—Northallerton, Stokesley, 1911. O.S. 96 N.W., 1883.
 43—Grosmont, Rosedale Abbey, 1909. O.S. 96 N.E., 1883.
 44—Scarborough, Robin Hood's Bay, 1909. O.S. 95 N.W., 1881.
 52—Thirsk, Ripon, 1912. O.S. 96 S.W., 1884.
 53—Malton, Helmsley, Pickering, 1909. O.S. 96 S.E., 1882.
 54—Scarborough, Filey, 1908. O.S. 95 S.W., 1881.
 55—Flamborough Head, 1909. O.S. 95 S.E., 1881.
 63—York, 1909. O.S. 93 N.E., 1882.
 64—Driffield, 1909. O.S. 94 N.W., 1884.
 65—Bridlington, 1909. O.S. 94 N.E., 1882.
 71—Selby, Pocklington, 1909. O.S. 93 S.E., 1885.
 72—Market Weighton, 1909. O.S. 94 S.W., 1884.
 73—Hornsea, 1909. O.S. 94 S.E., 1883.

INDEX MAPS—SCALE 4 MILES TO AN INCH.

OLD SERIES*: Solid only. Printed in Colours.

- 5—Western and Central Yorkshire, including Saltburn, York, and Doncaster, 1896. Revised, 1906.
 6—Yorkshire Coast from Staithes, north of Whitby, to the mouth of the Humber, 1889.
 8—Southern end of Yorkshire, Sheffield, 1896. Revised, 1901.

NEW SERIES.

- 4—Yorkshire, north of Wensleydale and Scarborough. Solid only, 1907.
 7—Yorkshire, west of Hull and Scarborough and north of Doncaster. Solid only, 1907.
 8—East Yorkshire, Flamborough Head and Holderness. Drift Edition, 1907. Solid only, 1908.

* Out of print.

HORIZONTAL SECTIONS.

*These are engraved on Copper plates, and are drawn on a true scale of 6 inches to a mile and coloured (by hand) in accordance with the maps. Those marked thus * have brief explanations. Price 2d. each.*

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- 64—From Northwich to Marsden, Yorkshire ; through Bowdon, Altringham, Manchester, and Glodwick. [Maps 88 S.W. ; and 6 inch Yorkshire, 259, 270, 271], by E. HULL, 1864. (Withdrawn).
- 69*—From Doghill Green, Cheshire, across the Poynton Coalfield, the Peak of Derbyshire, the Coalfield of Hallamshire, North of Sheffield. [Maps 82 N.W., 1-inch ; and 289, 290, 293, 294, 295, 6-inch Yorkshire], by A. H. GREEN, 1867. Revised, 1872.
- 85—No. 1, From Hameldon Hill across the Burnley Basin and the Ribble Valley, to the River Hodder in the Forest of Bowland. 2, From Black Hambleton through Burnley to the River Hodder at Slaiburn, Yorkshire. [Maps 88 N.W., 91 S.E., 92 N.W., 92 S.W. ; and 164, 165, 181, 182, 198, 229, 6-inch Yorkshire], by E. HULL, R. H. TIDDEMAN, and C. E. DE RANCE, 1871.
- 88*—Across the valley of the River Don between Sheffield and Conisborough. [Maps 82 N.W., 82 N.E., 87 S.W., 87 S.E. ; and 283, 284, 288, 289, 290, 295, 6-inch Yorkshire], by A. H. GREEN, 1873.
- 89*—Across the Yorkshire Coalfield, from the N.W. of Sheffield by Ecclesfield, Wentworth, and through Snaith and Barlow. [Maps 82 N.W., 87 S.W., 87 S.E., 87 N.E., and 236, 237, 251, 264, 265, 276, 283, 288, 289, 293, 294, 6-inch Yorkshire], by A. H. GREEN, 1873.
- 90*—From Ughill Moor, west of Sheffield, across the Yorkshire Coalfield, by Wharncliffe and Upton ; thence through Wentbridge, to the environs of Selby. [Maps 92 N.W., 87 S.W., 87 N.W., 87 N.E., 93 S.E., and 221, 235, 236, 250, 263, 264, 272, 282, 287, 288, 293, 6-inch Yorkshire], by A. H. GREEN, 1873.
- 91*—No. 1, From the upper part of the Derwent to the centre of the Yorkshire Coalfield, across Broomhead and Whitwell Moore, Darley Dale, and Houghton to Houghton

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Common. 2, From Hoyland, crossing the Coal-measures of Silkstone, Darton, Ackton, and Glasshoughton to Newton Colliery near Castleford. [Maps 81 N.E., 87 S.W., 87 N.W., 88 S.E., 1-inch ; and 234, 248, 249, 262, 273, 274, 275, 281, 282, 287, Yorkshire, 6-inch], by A. H. GREEN, 1875.

92*—From Howden Moors, across the Yorkshire Coalfield by the north of Barnsley, by Byram, to the outskirts of Selby. [Maps 87 N.E., N.W., S.W., 88 S.E., 1-inch, 220, 221, 234, 235, 249, 262, 263, 273, 274, 280, 281, Yorkshire, 6-inch], by A. H. GREEN, and J. C. WARD, 1873.

93*—From the northern end of the Saddleworth Valley, across the Yorkshire Coalfield by Wakefield and Sharlston to the north of Pontefract. [Maps 88 S.W., S.E., N.E., 87 N.W., 1-inch ; 234, 247, 248, 249, 259, 260, 261, 271, Yorkshire, 6-inch], by A. H. GREEN, J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1873.

94*—From Marsden, west of Huddersfield, to Bolton Percy. [Maps 88 S.E., N.E., 87 N.W., 93 S.W., 1-inch ; 190, 205, 219, 220, 233, 234, 246, 247, 248, 259, 260, Yorkshire, 6-inch], by A. H. GREEN, J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1874.

95*—From the Yorkshire Coalfield south of Bingley, across Oakenshaw, near Bradford, near Barnsley to the neighbourhood of Doncaster. [Maps 87 N.W., S.W., S.E., 88 N.E., 92 S.E., 1-inch ; 201, 216, 231, 232, 247, 248, 262, 263, 275, 276, Yorkshire, 6-inch], by A. H. GREEN, R. RUSSELL, and C. FOX-STRANGWAYS, 1873.

96*—From the northern side of the Skipton Anticlinal, by Rumbles Moor, Baildon, Calverley Moor, Pudsey, Gildersome, and Dewsbury, to the neighbourhood of Felkirk, N.E. of Barnsley. [Maps 92 N.E., 92 S.E., 88 N.E., 87 N.W., 87 S.W., 1-inch ; 151, 168, 185, 186, 201, 202, 217, 232, 247, 248, 262, 263, Yorkshire, 6-inch], by A. H. GREEN, J. R. DAKYNS, J. LUCAS, R. RUSSELL, C. FOX-STRANGWAYS, and W. H. DALTON, 1876.

97*—From Otley, across the Yorkshire Coalfield by Bramley to near Conisborough. [Maps 87 N.W., S.W., S.E.,

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- 92 S.E., 93 S.W., 1-inch ; 187, 202, 217, 218, 233, 248, 249, 263, 275, 276, 284, 6-inch], by A. H. GREEN, J. C. WARD, J. LUCAS, and R. RUSSELL, 1873.
- 98*-Across the Brimham Rocks, the Lower Coal Measures of Chapel Allerton and Leeds ; the Middle Coal-Measures of Osmondthorpe ; Middle Coal-Measures of Sharlston, to the neighbourhood of Havercroft. [Maps 87 N.W., 92 N.E., S.E., 93 S.W., 1-inch ; 136, 153, 170, 187, 188, 203, 218, 233, 234, 249, 263, Yorkshire, 6-inch], by A. H. GREEN, J. C. WARD, J. LUCAS, and R. RUSSELL, 1876.
- 99*-From Gybdykes, north-east of Masham, across the Harrogate Anticlinal ; the Lower Coal-Measures of Seacroft, and the Middle Coal-Measures of Austhorpe, to the River Aire at Mickletown. [Maps 87 N.W., 93 N.W., S.W., 96 S.W., 97 S.E., 1-inch ; 101, 118, 119, 137, 154, 171, 188, 203, 218, 219, 234, Yorkshire, 6-inch], by J. C. WARD, J. LUCAS, C. FOX-STRANGWAYS, and R. RUSSELL, 1876.
- 100*-From the neighbourhood of Boroughbridge to the Yorkshire Coalfield, by Boroughbridge, Knaresborough, Parlington Hollins, the Middle Garford, Sharlston and Nostel. [Maps 87 N.W., 93 N.W., S.W., 1-inch ; 138, 154, 155, 172, 189, 204, 219, 234, 249, 263, Yorkshire, 6-inch], by J. R. DAKYNS, J. C. WARD, C. FOX-STRANGWAYS, and R. RUSSELL, 1876.
- 101*-From Blackstone Edge, near Todmorden, by North Dean, South of Halifax, Hunslet, Scholes, and Newton Kyme, to the Alluvial Flat of the River Wharfe. [Maps 87 N.W., 88 N.E., N.W., 93 S.W., 1-inch ; 188, 189, 190, 203, 204, 217, 218, 230, 231, 232, 244, 245, Yorkshire, 6-inch], by W. T. AVELINE, J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1875.
- 102—From Heptonstall Moors, north Todmorden, by Otley and Wharfedale ; the Harrogate anticlinal, to the neighbourhood of Knaresborough. [Maps 88 N.W., 92 S.E., 93 N.W., 1-inch ; 154, 155, 170, 171, 186, 187, 200, 201, 214, 215, Yorkshire, 6-inch], by J. R. DAKYNS, J. LUCAS, C. FOX-STRANGWAYS, and W. H. DALTON, 1874.

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- 129—From Baildon Common, by Ilkley, Wharfedale, Greenhow Hill, and the Craven Fault, to Wensleydale. [Maps 97 S.W., S.E., 92 N.E., S.E., 1-inch ; 66, 82, 83, 99, 116, 134, 151, 152, 169, 186, 201, Yorkshire, 6-inch], by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1882.
- 130*—From Staithes, through Whitby, across the Vale of Pickering to the Chalk of Willerby Wold. [Maps 95 S.W. N.W., 104 S.E., S.W., 1-inch ; 19, 20, 32, 33, 47, 62, 77, 93, 109, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1883.
- 131*—From Redcar, by Upleatham, Danby, Pickering Moors, and the Vale of Pickering to Knapton. [Maps 104 S.W., 96 N.E., 96 S.E., 95 S.W., 1-inch ; 7A, 7, 17, 18, 30, 31, 45, 60, 75, 91, 92, 108, 125, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, C. REID, and G. BARROW, 1883.
- 132*—From the Tees at Middlesbrough by Eston, Easby Moor, and the Howardian Hills to Brandsby and Stillington. [Maps 93 N.E., 96 S.E., 103 S.E., 104 S.W., 1-inch ; 6, 16, 17, 29, 43, 58, 73, 89, 105, 122, 140, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1883.
- 133*—From Ferryhill across the Valley of the Tees, Whorlton, and Osmotherly Moors, to Easingwold. [Maps 93 N.W., 96 S.W., N.W., 103 S.E., N.E., 1-inch ; 15, 27, 28, 42, 57, 72, 88, 104, 121, Yorkshire, 35, 43, 49, 50, 56, Durham, 6-inch], by H. H. HOWELL, C. FOX-STRANGWAYS, and G. BARROW, 1884.
- 134*—From Codbeck, east of Northallerton, across Black Hambleton, Rosedale, Egton, High Moor, to the Coast of Hawske Bottoms, south of Whitby. [Maps 95 N.W., 96 N.E., 96 N.W., 1-inch ; 32, 33, 45, 46, 56, 57, 58, 59, 60, 71, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, C. REID, and G. BARROW, 1883.
- 135—From Upsall, across Boltby Moor, the Hambleton Hills, by Hackness and Seamer Moor, to Gristhorpe Bay. [Maps 95 N.W., S.W., 96 N.W., N.E., S.W., S.E., 1-inch ; and 61, 62, 71, 72, 73, 74, 75, 76, 77, 93, 94, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1884.
- 136*—From below Whitestone Cliff, across the Hambleton Hills, to the coast at Scarborough. [Maps 95 S.W.,

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- 96 S.W., S.E., 1-inch ; and 74, 77, 78, 88, 89, 90, 91, 92, 93, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, 1884.
- 137*-From Knaresborough, across the Vale of York, and the Howardian Hills, the Vale of Pickering, to Robin Hood's Bay. [Maps 93 N.W., 95 N.W., 96 N.E., S.E., 1-inch ; 46, 47, 60, 61, 74, 75, 90, 105, 106, 121, 122, 138, 139, 155, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1884.
- 138*-Sections illustrating the structure of the Oolites of Howardian Hills. Section A., From Hovingham Spa, across Terrington, and Stittonham to Flaxton. Section B., From Slingsby, across Castle Howard Park, to Barton-le-Willows. Section C., From Amotherby and Swinton, across Hildenley, Huttons-Ambo, and Westow, to Leppington. Section D., From Winteringham, along the edge of the Wolds by Settrington, North Grimston and Birdsall, to Water Dale and Kirkby Underdale. [Maps 93 N.E., 94 N.W., 95 S.W., 96 S.E., 1-inch ; and 105, 106, 123, 124, 125, 141, 142, 143, 159, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, 1884.
- 139*-Section along the Western Escarpment of the Wolds, illustrating the overlap of the Cretaceous Rocks, from the Oolites of Malton, Langton, Burythorpe, Leavening, Acklam, and Kirkby Underdale, across the Lias and the Keuper Marl of Bishop Wilton, Kildwick Percy, Londesborough, and Market Weighton, to the Oolites of Sancton, Newbald, South Cave, and Brough on the Humber. [Maps 86, 93 N.E., S.E., 94 S.W., 96 S.E., and 124, 142, 159, 176, 193, 194, 209, 224, 238A, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, 1884.
- 146—From Saddleworth, Rishworth Moor, by the Skipton Anticlinal, to near Grassington. [Maps 88 N.W., S.W., 92 S.E., N.E., 1-inch ; and 151, 168, 185, 200, 230, 245, 249, 271, Yorkshire, 6-inch], by J. R. DAKYNS, J. C. WARD, and W. H. DALTON, 1886.
- 147—Sections illustrating the Geology of the Country between Slaidburn and Ingleton (No. 1) ; and between Morecambe Bay and Settle (No. 2). [Maps 91 N.E., 92 N.W., 97 S.W., and 30, 31, 32, Lancashire, 6-inch ; 131, 132, 148, 165, Yorkshire, 6-inch], by R. H. TIDDEMAN, 1891.

VERTICAL SECTIONS.

SCALE 40 FEET TO AN INCH.

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- 28—Carboniferous Rocks around Grassington Moor and Kettlewell. [Maps 92 N.E., 97 S.W., S.E., 1-inch; 97, 116, 134, Yorkshire, 6-inch], by J. R. DAKYNS, 1874.
- 30—Strata above the Barnsley Coal in the Southern part of the Yorkshire Coalfield. 1, Shireoaks. 2, Kiveton Park. 3, Holmes. 4, Thryberg Hall. 5, Swinton Park Gate. 6, Albany and Royal Oak. 7, Denaby Main. 8, Oaks. 9, Carlton Borings. [Maps 82 N.E., N.W., 87 S.W., S.E., 1-inch]; by A. H. GREEN, and R. RUSSELL, 1868.
- 31—Strata above the Barnsley Coal, in continuation of Sheet 30. 1, Norwood. 2, Aston. 3, Fence. 4, Orgreave. 5, Tinsley Park. 6, Pit at Rawmarsh. 6A, Boring at Rawmarsh. 7, Rainborough Pit. 8, Lund Hill. 9, Wombwell Main. 10, Part of a boring at Swaithe. Swaithe Main. 11, Pinder Oaks. 12, Mount Osborne. 13, Burton Bank. 14, Gawber New. [Maps 82 N.W., 87 S.W., 1-inch; 274, 275, 283, 289, 295, 299, 300, Yorkshire, 6-inch,] by A. H. GREEN, and R. RUSSELL, 1869.
- 32—Strata between the Barnsley and Silkstone Coals. 1, Reinstown Park. 2, Intake. 3, Nunnery New. 4, Pitsmoor. 5, Garrow Tree Hill. 5A, Winterhill Iron-stone Pit. 6, Greaves. 6A, Boring at Bradgate. 7, Fenton's. 8, Thorncliffe. 9, Warncliffe Silkstone. 10, New Sovereign. 11, Strafford Main. 12, Pit at Great Ings. 12A, Silkstone Fall. 13, Slack Hills. 13A, Church Lane. [Maps 82 N.W., 87 S.W., 1-inch; 274, 282, 288, 289, 294, 295, Yorkshire, 6-inch], by A. H. GREEN and R. RUSSELL, 1869.
- 35—Yorkshire Coalfield, between Penistone and Halifax. 1, Hoyland, Swaine, Penistone, and Hazlehead. 2, Bagden, Lower Cumberworth, High Flats, and New Mill. 3, Kirkburton, Highburton, and Mytholm Bridge. 4, Fenay Bridge and Huddersfield. 5, Brighouse and High Field Pit. 6, Norwood Green. Northowram, Halifax, and Catherine Slack. [Maps 88 S.E., and N.E.,

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- 1-inch ; 216, 231, 246, 247, 260, 261, 272, 273, 274, 281, Yorkshire, 6-inch], by J. C. WARD, 1869.
- 36—Yorkshire Coalfield, Measures above the Barnsley Coal between Barnsley and Wakefield. 1, (a) Railway cutting at Blacker Hill. (b.) East Gawber Colliery, Barnsley. 2, (a.) Borehole near Royston. (b.) Dearne Side Colliery. 3, (a.) Borehole near Chevet Lane. (b.) Woolley Coal Company's Wheatley Wood Pit. 4, Crigglestone Cliff Collieries. 5, (a.) Bore-hole in Hallas Field, near Wakefield. (b.) Lupset Colliery, Wakefield. (c.) Roundwood Colliery, Wakefield. 6, Manor Colliery, Wakefield. 7, Bore-hole on Heath Common. 8, St. John's Colliery, Newlands. 9, Snydale Colliery. 10, Featherstone Colliery. [Maps 87 N.W., S.W., 1-inch, and 248, 249, 262, 274, Yorkshire, 6-inch], by A. H. GREEN, and T. V. HOLMES, 1870.
- 37—Yorkshire Coalfield, Measures between the Barnsley and Silkstone Coals between Barnsley and Wakefield. 1, (a.) Bore-hole at Gawber Hall Colliery. (b.) Higham Colliery. 2, (a.) Bore-hole at Briery Royds Colliery. (b.) Bore-hole at Darton. 3, Falconer Colliery. 4, (a.) Bore-hole near Snapethorpe. (b.) (c.) Bore-holes near Cawthorne. 5, Coals about West Clayton and High Hoyland. 6, Bore-hole near Emley. 7, (a.) Bore-hole on Bretton Common. (b.) Sinkings and Borings at Victoria Colliery, Netherton. 8, Hartley Bank Collieries. 9, Stanley Victoria Colliery. 10, West Riding Colliery. [Maps 87 N.W., S.W., 1-inch], 233, 234, 248, 261, 262, 274, Yorkshire, 6-inch], by A. H. GREEN, and T. V. HOLMES, 1870.
- 38—Yorkshire Coalfield, Measures above the Haigh Moor Coal, in the neighbourhood of Wakefield 1, Bore-hole at Victoria Mill, Ossett. 2, Roundwood Colliery, Wakefield. 3, Manor Colliery, Wakefield. 4, (a.) St. John's Colliery, Wakefield (b.) Newton Colliery, Wakefield. 5, Stanley Victoria Colliery. 6, West Riding Colliery. 7, Whitwood Collieries (a.) Bore-hole at Loscoe. (b.) Bore-hole. 8, Wheldale Colliery, Castleford. 9, Newton Colliery, Castleford. 10 Coals about Glass Houghton. [Map, 87 N.W., 1-inch ; 233, 234, 248, 249, Yorkshire, 6- inch], by A. H. GREEN, and T. V. HOLMES, 1871.

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- 40—Strata between the Haigh Moor and Blocking Coals near Flockton and Leeds (Yorkshire). 1, Prince of Wales Pit, Flockton. 2, Engine Pit Emroyd. (a.) Boring, Hostingley Colliery. (b.) Hopton, Mirfield. 3, Saville Pit, Dewsbury. (a.) Bore-hole, No. 12, Soothill Estate (b.) Boring, Northfield House, Dewsbury. (c.) Boring near Red Lathe, Mirfield. (d.) Boring, Jackey Wood, near Heckmondwike. (e.) Boring, Hazel Grove, Denby Grange. 4, Boring, Cross Bank Colliery, Batley. (a.) Boring, Carlinghow, 5, Muffatt Lane Pit, White Lee Colliery. (a.) Boring, Little Gomersall Colliery. (b.) West Pit, Gomersall. (c.) Boring, Wentworth Colliery, Birstall. (d.) Boring, West Yorkshire Colliery, Birstall. 6, Street Pit, Gildersome. 7, No. 2 Pit, Victoria Colliery, Bruntcliffe. 8, Morley Main Colliery. 9, Engine Pit, West Ardsley Colliery. 10, West Pit, Middleton Colliery. (a.) No. 2 Pit, Beeston Manor Colliery. 11, Boring, Simpson's Spring. East Ardsley. 12, Cousin's Pit, Rothwell Haigh. (a.) Bye Pit, Rothwell Haigh. (b.) Victoria Pit, Rothwell Haigh. Boring, Swillington Bridge. [Maps 87 N.W., 88 N.E., 1-inch ; 261, 247, 232, 233, 218, 219, Yorkshire, 6-inch.] by R. RUSSELL, 1871.
- 42—Yorkshire Coalfield. Measures between Huddersfield and Leeds. 1, Four Lane Ends, Addlecroft. 2, Boring at West side of Railway between Jill Lane and Tom Royd's House. 3, Boring at bottom of Engine Pit Dewsbury Moor. Strawberry Pit, Liversedge. (a.) Boring at Cleckheaton. 5, Green Lane Pit, Clifton. 6, High Moor Lane Pit, Clifton. 7, Well-sinking at Cleckheaton. (a.) Popplewell Pit, Scholes. (b.) Sinking at Popplewell. 8, Cleckheaton Engine Pit, Hunsworth Colliery. 9, No. 2 Pit, Hunsworth Colliery. 10, Westgate Hill, near Toll Bar. 11, No. 13 Pit, Broad-Oaks Colliery. 12, No. 4 Pit, Beeston Manor Colliery. (a.) Boring at Cross Flats, Beeston. 13, Engine Pit, Neville Hill Colliery [Maps 88 N.E., 87 N.W., 93 S.W., 1-inch ; 247, 231, 232, 217, 218, Yorkshire, 6-inch], by R. RUSSELL, 1872.
- 43—Yorkshire Coalfield. Measures in the Halifax, Bradford, and Leeds districts. 1, Boring, Mirfield. 2, Boring,

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Windy Bank. 3, Breaks Pit. (a.) Boring, near Breaks Pit. 4, First Mine Shaft, Lower Wike. 5, Upper Cow Close Pit, Wike. 6, Section in the Low Moor District. 7, Boring, Jaggar Park Wood, near Shelf. 8, Boring, Queenshead, near Bradford. (a.) Average Section in the Queenshead, Thornton, and Manningham Districts. 9, Foot Road Pit, Parkside, West Bowling, near Bradford. 10, Bowling Iron Works. 11, Boring at Mr. Garnett's Mill Bradford Moor. 12, No. 1 Pit, Tong. 13, Boring at Westgate Hill. 14, Charles Pit, Tong. (a.) Boring, Rawden. (b.) Average Section in the Calverley, Horsforth, and Rawden Districts. [Maps 88 N.E., 92 S.E.; 247, 231, 216, 217, Yorkshire, 6-inch], by R. RUSSELL, and T. V. HOLMES. 1872.

44—Yorkshire Coalfield Measures in the Bradford and Leeds Districts. 1, Booth Holme Field Colliery, Tong. 2, N. Pit, Tong. 3, Mill Pit, Tong. 4, Sowden Air Pit. 5, Boring, Fleece Inn, Curwell. 6, No. 10 Pit, Beeston Manor Colliery. 7, No. 2 Pit, Beeston Manor Colliery. 8, Boring at Beeston. 9, Boring, Dragon Pit, Wortley. 10, Air Pit, Moggy Field, Wortley. 11, Lane Pit, Wortley. 12, Boring, Wellhouse Foundry, Leeds. 13, Boring, Union Foundry, Leeds. 14, Brewery, South Brook Street, Leeds. 15, Boring, Dye Works, East Street, Leeds. 16, Boring, Merrion Square Mill, Leeds. 17, Oriental Baths, Cookridge Street, Leeds. 18, Boring, St. Peter's Hill, Burley Road, Leeds. 19, No. 2 Boring, Green Farm, Leeds. 20, Gibraltar Colliery, Hunslet, near Leeds. 21, Dame Pit, Waterloo Main Colliery. 22, Nursery Pit, Waterloo Main Colliery. 23, Boring, Killingbeck Park, near Leeds. 24, Boring near Crossgates. 25, Victoria Pit, Manston. 26, Boring, North Side of Fox Wood, Seacroft. 26A, Average Section in the district North of Leeds. [Maps 87 N.W., 88 N.E., 93 S.W.; 217, 218, 203, Yorkshire, 6-inch], by J. C. WARD and R. RUSSELL, 1872.

45—Yorkshire Coalfield. 1, Boring in Soothill Estate. 2, Newhall Colliery, Middleton, near Leeds. 3, Bye Pit, Rothwell Haigh Colliery, near Leeds. 4, Newmarket

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Colliery, Methley. 5, Hool Wood Pit. 6, Boring, Little Cross Holme, Allerton Bywater, near Leeds. 7, Boring at Fairburn. 8, Boring at Fairburn. 10 and 11, Boring at Kippax. 12, Boring at Billy Wood, Kippax. 13, Borings at Westfield Lamb Bridge, Kippax. 14, Carforth Bridge, near Leeds. 15, Boring at Colton, near Leeds. 16, Bye Pit. West Yorkshire Colliery, Austhorpe. 17, Boring near Micklefield. 18, Boring at Micklefield. [Maps 87 N.W., 93 S.W., 1-inch; 218, 219, 232, 233, 234, 235, Yorkshire, 6-inch], by J. C. WARD and R. RUSSELL, 1873.

- 67—Oolites of the Yorkshire Coast, from Filey to Cloughton. [Maps, 95 N.W., 95 S.W., 1-inch; and 62, 78, 94, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and R. ETHERIDGE, 1879.

MAPS—SCALE 6 INCHES TO A MILE.

Those marked thus * are published, the others are in MS., and are deposited in the Geological Survey Library for reference, with the exception of those marked thus †.

In the earlier stages of the Survey of the Yorkshire Coalfield and of the surrounding area, the Drift was not mapped and is not shown either on the published maps or on the M.S. copies deposited in the Library of the Geological Survey. In such cases the words "Solid only" are added at the end of each of the following entries.

Some whole-sheet maps have been replaced by quarter sheets with a newer topography. Copies of smaller areas can thus be obtained and in some cases a drift copy has been made of some areas when it could not be made for the whole sheet.

SHEET

- 1—Cronkley Fell, by W. GUNN and C. T. CLOUGH. 1877.
- 2—Holwich, Lune Moor, by W. GUNN, 1877.
- 3*—Lune Forest, by W. GUNN, 1872-75; pub. 1892.
- 4—Mickleton, by W. GUNN, 1871.
- 5*—Romaldkirk, Cotherstone, by W. GUNN, 1871; pub. 1879.
- 6—Middlesbrough, by A. C. G. CAMERON and G. BARROW, 1878.
- 7*—Redcar, by G. BARROW, 1877; pub. 1881.

SHEET

- 7a—Redcar Scars, by G. BARROW, 1880.
 8*—Saltburn, by G. BARROW, 1877; pub. 1888.
 9*—Rockliff, N.W. of Staithes, by G. BARROW, 1878.
 10—Stainmoor Common, by W. GUNN, 1875.
 11*—Cotherstone Moor, Bowes Moor, by W. GUNN, 1872-1875; pub. 1892.
 12*—Bowes, Lartington, by W. GUNN, 1879.
 13*—Wycliffe, by W. GUNN, 1878.
 14—Cleasby, Pierce Bridge, by W. GUNN, 1875.
 15—Yarm, South Stockton, by A. C. G. CAMERON, 1877.
 16—Ormesby, Normanby, Stainton, by A. C. G. CAMERON and G. BARROW, 1878.
 17*—Guisborough, by G. BARROW, 1888.
 18—Skelton, Loftus, by G. BARROW, 1879.
 19*—Hinderwell, Staithes, Runswick, by G. BARROW, 1899
 20*—Lythe, by G. BARROW, 1879.
 21—Nine Standards, by J. G. GOODCHILD, 1878. Revised by G. BARROW, 1882.
 22—Stainmoor Forest, Bowes Moor, by W. GUNN and G. BARROW, about 1882.
 23—Scargill, by W. GUNN and G. BARROW, 1883.
 24*—Kirkby Ravensworth, by W. GUNN, 1878.
 25*—Aldborough, Melsonby, Barton, by W. GUNN, 1879.
 26—Croft, by W. GUNN and A. C. G. CAMERON, 1879.
 27—Crathorne, Kirk Levington, by A. C. G. CAMERON, 1878.
 28—Rudby, Stokesley, by A. C. G. CAMERON, 1878.
 29—Ayton, Kildale, by C. REID and G. BARROW, 1879.
 30—Castleton, Danby Moor, by C. REID und G. BARROW, 1880.
 31—Ugthorpe, Lealholm Bridge, by C. REID and G. BARROW, 1879.
 32*—Whitby, by G. BARROW, 1880
 33*—Hawske Bottoms, by G. BARROW, 1878.
 34—Ulgill Rigg, by T. MC. K. HUGHES; Drift by A. STRAHAN, 1884.
 35—Birkdale Common, Ravenseat Moor, by J. R. DAKYNS and G. BARROW, 1883.
 36—Angram, Stonesdale Moor, Melbecks Moor, by C. T. CLOUGH, and G. BARROW, 1883.
 37—Reeth, by W. GUNN and G. BARROW, 1883.

SHEET

- 38*-Marske, by W. GUNN, 1878.
39*-Richmond, Middleton Tyas, by W. GUNN, 1879.
40—East Cowton, by W. GUNN and A. C. G. CAMERON, 1879.
41—East Harlsey, by A. C. G. CAMERON and G. BARROW, 1880.
42—Kirkby, Whorlton, by A. C. G. CAMERON and G. BARROW, 1880.
43—Urra, Ingleby Greenhow, by C. REID and G. BARROW, 1880.
44—Danby Dale, Fryup Dale, by C. REID, 1879.
45—Egton, Glaisdale, Grosmont, by C. REID and G. BARROW, 1878.
46*-Sleight's Moor, Fylingdales Moor, by G. BARROW, 1879.
47*-Robin Hood's Bay, by G. BARROW, 1879.
48—Howgill, by T. Mc K. HUGHES and A. STRAHAN, 1885.
49—St. Marks, Baugh Fell, by T. Mc K. HUGHES, R. RUSSELL, A. STRAHAN, R. H. TIDDEMAN, C. T. CLOUGH, G. BARROW, 1885.
50—Cotterdale, by J. R. DAKYNS and C. E. DE RANCE, 1883.
Solid only.
51—Muker, by C. T. CLOUGH, C. E. DE RANCE, 1885.
52—Grinton, Swaledale, by W. GUNN, 1885.
53*-Downholme, by W. GUNN, 1879.
54—Catterick, by W. GUNN, 1875.
55—Kirkby Fleetham, Danby Wiske, by W. GUNN and A. C. G. CAMERON, 1881.
56—Northallerton, by A. C. G. CAMERON and G. BARROW, 1881.
57—Whorlton Moor, by C. FOX-STRANGWAYS and G. BARROW, 1881.
58—Rutland Moor, Bilsdale, by C. FOX-STRANGWAYS, C. REID, and G. BARROW, 1880.
59—Rosedale Abbey, by C. REID, 1881.
60—Pickering Moors, by C. FOX-STRANGWAYS and C. REID, 1881.
61—Wykeham High Moor, Fylingdales Moor, by C. FOX-STRANGWAYS, 1876.
62*-Cloughton, Harwood-dale, Staintondale, by C. FOX-STRANGWAYS, 1879.
63—Sedbergh, by T. Mc K. HUGHES and A. STRAHAN, 1885.
64—Dent, Bow Fell, by T. Mc K. HUGHES, A. STRAHAN and G. BARROW, 1884.

SHEET

- 65—Hawes, by C. FOX-STRANGWAYS, C. T. CLOUGH, and A. STRAHAN, 1883.
66—Askrigg, Bainbridge, by J. G. GOODCHILD and J. R. DAKYNS, 1880.
67—Aysgarth, by J. R. DAKYNS, W. H. DALTON and W. GUNN, 1871.
68*—Leyburn, by J. LUCAS, W. GUNN, and W. H. DALTON, 1880.
69—Patrick Brompton, by W. GUNN and J. LUCAS, 1872.
70—Bedale, Leeming, Ainderly Steeple, by A. C. G. CAMERON, 1880.
71—South Otterington, Borrowby, by H. H. HOWELL, A. C. G. CAMERON, and G. BARROW, 1881.
72—Kirkby Knowle, Kepwick, Hawnby, by C. FOX-STRANGWAYS and G. BARROW, 1880.
73—Helmsley Moor, Kirkdale Moor, by C. FOX-STRANGWAYS and G. BARROW, 1881.
74—Lastingham, Gillamoor, by C. FOX-STRANGWAYS and C. REID, 1881.
75—Levisham, Cropton, Newton Dale, by C. FOX-STRANGWAYS, 1876.
76—Allerston Low Moor, Lockton Low Moor, by C. FOX-STRANGWAYS, 1876.
77*—Scalby, Hackness, by C. FOX-STRANGWAYS, 1878.
78*—Scarborough, by C. FOX-STRANGWAYS, 1878.
79—Moors West of Whernside, by A. STRAHAN, 1883.
80—Whernside, by J. R. DAKYNS and A. STRAHAN, 1884.
81—Cam Fell, Dod Fell, by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1883.
82*—Kidstones, Bishopdale, by J. R. DAKYNS, 1871; pub. 1879.
83*—Carlton, by J. R. DAKYNS and 1871; pub. 1878.
84*—East Witton, by J. LUCAS and W. H. DALTON, pub. 1879.
85—Masham, Jervaulx Abbey, by J. LUCAS, 1881.
86—Pickhill, Kirklington, Well, by A. C. G. CAMERON, 1881.
87—Thirsk, by A. C. G. CAMERON and G. BARROW, 1881.
88—Feliskirk, Hambleton Hills, by C. FOX-STRANGWAYS and G. BARROW, 1881.
89—Helmsley, by C. FOX-STRANGWAYS, 1877.

SHEET

- 90—Normanby, Kirkby Moorside, Sinnington, by C. FOX-STRANGWAYS, 1877.
- 91—Pickering, by C. FOX-STRANGWAYS, 1877.
- 92—Ebberston, Allerston, by C. FOX-STRANGWAYS, 1877.
- 93*—Brompton, Seamer, by C. FOX-STRANGWAYS, 1878.
- 94*—Gristhorpe, Cayton Bay, by C. FOX-STRANGWAYS, 1878.
- 95—Thornton in Lonsdale, by T. MC K. HUGHES, and R. H. TIDDEMAN, 1881.
- 96—Ingleton, Ingleborough, by R. H. TIDDEMAN and C. FOX-STRANGWAYS, 1884.
- 97*—Foxup, Halton Gill, by T. MC K. HUGHES, J. R. DAKYNS, and W. H. DALTON, 1871; pub. 1879.
- 98*—Buckden, by J. R. DAKYNS and W. H. DALTON, 1870; pub. 1878.
- 99*—Little Whernside, Nidderdale, by J. R. DAKYNS, and J. LUCAS, pub. 1879.
- 100*—Lofthouse, Masham Moor, by J. LUCAS, 1875.
- 101—Kirkby Malzeard, by J. LUCAS, 1877-1880.
- 101—Kirkby Malzeard, by J. LUCAS, 1877?
- 102—Wath, West Tanfield, by H. H. HOWELL and A. C. G. CAMERON, 1881.
- 103—Topcliffe, by A. C. G. CAMERON and G. BARROW, 1880.
- 104—Great Thirkleby, Coxwold, by C. FOX-STRANGWAYS, and G. BARROW, 1880.
- 105—Ampleforth, Gilling, by C. FOX-STRANGWAYS, 1878.
- 106—Slingsby, Hovingham, Nunnington, by C. FOX-STRANGWAYS, 1879.
- 107—Kirkby Misperton, by C. FOX-STRANGWAYS, 1877.
- 108—Yedingham, Scampston, by C. FOX-STRANGWAYS, 1874.
- 109—Sherburn, Ganton, by C. FOX-STRANGWAYS, 1874.
- 110—Filey, Hunmanby, by C. FOX-STRANGWAYS, 1873.
- 111—Speeton Cliff, by C. FOX-STRANGWAYS, 1873.
- 112—Bentham, by R. H. TIDDEMAN, 1871-1877. Solid only.
- 113—Clapham, by W. GUNN and R. H. TIDDEMAN, 1883.
- 114—Horton in Ribblesdale, Great Stainforth, Fountain Fell, by W. GUNN and R. H. TIDDEMAN? 1883. Drift in West only.
- 115*—Kettlewell, Arncliffe, Malham Tarn, by J. R. DAKYNS and W. H. DALTON, 1870; pub. 1878.

SHEET

- 116*—Conistone Moor, by J. R. DAKYNS and J. LUCAS, 1878.
Solid only.
- 117—Ramsgill, Nodderdale, by J. LUCAS, 1871. Solid only.
- 118—Sawley, Laverton, by J. LUCAS, 1878.
- 119—Ripon, by C. FOX-STRANGWAYS, 1870 and A. G. CAMERON, 1879.
- 120—Brafferton, by C. FOX-STRANGWAYS and A. C. CAMERON, 1879.
- 121—Easingwold, by C. FOX-STRANGWAYS, 1878.
- 122—Stillington, Crambe, Brandsby, by C. FOX-STRANGWAYS, 1878.
- 123—Castle Howard, by C. FOX-STRANGWAYS, 1879.
- 124—Malton, by C. FOX-STRANGWAYS, 1879.
- 125—Wintringham, Thorpe Basset, by C. FOX-STRANGWAYS, 1873.
- 126—Foxholes, Weaverthorpe, by C. FOX-STRANGWAYS, 1873.
- 127—Wold Newton, North Burton, by C. FOX-STRANGWAYS, 1873.
- 128—Flamborough, Speeton, by C. FOX-STRANGWAYS, 1873.
- 129—Flamborough Head, by C. FOX-STRANGWAYS, 1873.
- 130—Moors near Bentham and Slaidburn, by R. H. TIDDEMAN, 1881.
- 131—Turnerford, Burn Moor west of Settle, by R. H. TIDDEMAN, 1881.
- 132—Settle, by R. H. TIDDEMAN, 1881.
- 133—Kirkby Malham, by W. H. DALTON, 1878; revised by R. H. TIDDEMAN, 1886.
- 134—Grassington, by J. R. DAKYNS, 1870. Revised by R. H. TIDDEMAN, 1884.
- 135—Pateley Bridge, by J. R. DAKYNS and J. LUCAS, 1869.
- 136—Dacre Banks, Brimham Rocks, by J. LUCAS, and C. FOX-STRANGWAYS, 1871. Revised 1889.
- 137—Copgrove, by C. FOX-STRANGWAYS, 1871.
- 138—Boroughbridge, by C. FOX-STRANGWAYS, 1871.
- 139—Aune, by C. FOX-STRANGWAYS, 1871.
- 140—Sheriff Hutton, Sutton on the Forest, by C. FOX-STRANGWAYS, 1872.
- 141—Bulmer, Kirkham Abbey, by C. FOX-STRANGWAYS, 1879.
- 142—Langton, Westow, Acklam, by C. FOX-STRANGWAYS, 1879.

SHEET

- 143—Sledmere, Wharram le Street, by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1880.
- 144—Langtoft, by J. R. DAKYNS, 1880.
- 145—Kilham, by J. R. DAKYNS, 1880.
- 146—Bridlington, by J. R. DAKYNS, 1880.
- 147—Bowland Forest, by W. T. AVELINE and R. H. TIDDEMAN, 1883. Solid only.
- 148—Stocks in Bowland, Gisburn Forest, by R. H. TIDDEMAN, 1871. Solid only.
- 149—Long Preston, by R. H. TIDDEMAN, 1871. Solid only.
- 150—Gargrave, by R. H. TIDDEMAN, 1891. Solid only.
- 151*—Drebley, Appletreewick, Barden Moor, Eastby, by J. R. DAKYNS, 1869. Drift edition by R. H. TIDDEMAN, 1905.
- 152*—Blubberhouses, by J. R. DAKYNS and J. LUCAS, 1878. Solid only. Drift M.S., 1908.
- 153—Hampsthwaite, by J. LUCAS and C. FOX-STRANGWAYS, 1870. Solid only.
- 154—Knaresborough and Harrogate, by J. C. WARD and C. FOX-STRANGWAYS, 1871.
- 155—Goldsborough, Allerton, by C. FOX-STRANGWAYS, 1869.
- 156—Moor Monkton, Newton on Ouse, Kirk Hammerton, Shipton, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1871.
- 157—Skelton, Huntington, Saxby, Strensall, by C. FOX-STRANGWAYS, 1872.
- 158—Upper Helmsley, Stockton on the Forest, Stamford Bridge, by C. FOX-STRANGWAYS, 1872.
- 159—Bugthorpe, Kirkby Underdale, by C. FOX-STRANGWAYS, 1880.
- 160—Wetwang, Huggate, by J. R. DAKYNS, 1881.
- 161—Driffield, by J. R. DAKYNS, 1880.
- 162—Lowthorpe, Nafferton, by J. R. DAKYNS, 1881.
- 163—Barmston, Ulrome, by J. R. DAKYNS and C. REID, 1881.
- 164—Forest of Bowland, by R. H. TIDDEMAN, 1868.
- 165—Slaidburn, by R. H. TIDDEMAN and J. SHELSWELL, 1868.
- 166—Gisburn, by R. H. TIDDEMAN, W. GUNN and J. SHELSWELL, 1871.
- 167—Broughton in Craven, by W. GUNN, 1870.
- 168†—Skipton, by C. FOX-STRANGWAYS and W. H. DALTON, 1868.

SHEET

- 169—Denton, by C. FOX-STRANGWAYS, 1868.
- 170—Fewston, by J. C. WARD, J. LUCAS and C. FOX-STRANGWAYS, 1868.
- 171—Pannal, Spofforth, by J. LUCAS. 1869. Solid only.
- 172—Kirk Deighton, Wetherby, Cowthorpe, by W. T. AVELINE, J. R. DAKYNS, and C. FOX-STRANGWAYS, 1869.
- 173—Rufforth, Tockwith, by J. R. DAKYNS, 1872. Drift boundaries added, 1908.
- 174—York, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1872. Drift edition, 1882.
- 175—Dunnington, Wilberfoss, by C. FOX-STRANGWAYS, 1872.
- 176—Pocklington, Fangfoss, by C. FOX-STRANGWAYS, 1880.
- 177—North Dalton, Warter, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1881.
- 178—Cranswick, Bainton, by J. R. DAKYNS, 1881.
- 179—Beeford, North Frodingham, by J. R. DAKYNS, 1881.
- 180—Skipsea, Atwick, by J. R. DAKYNS, 1881.
- 181—Forest of Bowland, by R. H. TIDDEMAN, 1873.
- 182—Waddington, Grindleton, by R. H. TIDDEMAN, 1873.
- 183—Barnoldswick, by R. H. TIDDEMAN and W. GUNN, 1870. Revised 1873.
- 184*—Dale End, Kelbrook, Thornton in Craven, by W. GUNN, 1872. Solid only.
- 185*—Kildwick, Airedale, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1878. Solid only.
- 186—Illkley, by C. FOX-STRANGWAYS, 1869. Solid only.
- 187—Otley, by J. C. WARD and J. LUCAS, 1872. Solid only.
- 188—Harewood, by W. T. AVELINE, J. C. WARD, and J. LUCAS, 1870. Solid only.
- 189—Wetherby, by W. T. AVELINE, J. R. DAKYNS, J. C. WARD, and J. LUCAS, 1870. Solid only.
- 190—Tadcaster, by J. R. DAKYNS, 1870.
- 191—Naburn, Escrick, by J. R. DAKYNS and A. C. G. CAMERON, 1880; Drift, 1882.
- 192—Elvington, Sutton on Derwent, Weldrake, by A. C. G. CAMERON, 1880.
- 193—Everingham, Nunburnholme, by C. FOX-STRANGWAYS and A. C. G. CAMERON, 1880.
- 194—Londesborough, Goodmanham, by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1881.

SHEET

- 195—Lockington, by J. R. DAKYNS, 1880.
196—Catwick, Brandesburton, by J. R. DAKYNS, 1880.
197—Hornsea, by C. REID, 1881.
198—Great Mitton, by W. T. AVELINE, ?
199—Wadsworth Moor, by W. GUNN, 1869.
200*—Keighley, by J. R. DAKYNS and W. H. DALTON, 1878.
 Solid only.
201*—Bingley, by J. LUCAS, C. FOX-STRANGWAYS, and W.
 DALTON, 1871. Solid only.
202*—Calverley, Kirkstall, by J. C. WARD, J. LUCAS, and R.
 RUSSELL, 1878. Solid only.
203*—Seacroft, Chapel Allerton, Headingley, Leeds, by W. T.
 AVELINE, J. C. WARD, R. RUSSELL, and J. LUCAS, 1873.
 Solid only.
204*—Aberford, by W. T. AVELINE, J. R. DAKYNS, and J. C.
 WARD, 1871. Revised 1874. Solid only.
205—Bolton Percy, by J. R. DAKYNS, 1870.
206—Cawood, Stillingfleet, Riccall, by J. R. DAKYNS, and
 A. C. G. CAMERON, 1880.
207—Skipwith, Ellerton, Bubwith, by A. C. G. CAMERON, 1880.
208—Seaton Ross, Holme on Spalding Moor, by A. C. G.
 CAMERON, 1880.
209—Market Weighton, by C. FOX-STRANGWAYS, 1881.
210—Walkington, Beverley, by J. R. DAKYNS, 1880.
211—Waghen, Long Riston, by J. R. DAKYNS, 1880.
212—Withernwick, by C. REID, 1881.
213—Aldborough, by C. REID, 1881.
214—Heptonstall Moor, Wadsworth Moor, by J. R. DAKYNS,
 1869 ?
215*—Denholme, by J. R. DAKYNS, J. C. WARD, C. FOX-
 STRANGWAYS and W. H. DALTON, 1878. Solid only.
216*—Bradford, by J. C. WARD, J. LUCAS, and C. FOX-STRANG-
 WAYS, 1875. Solid only.
217*—Pudsey, by J. C. WARD, J. LUCAS, and R. RUSSELL
 1875. Solid only.
218*—Leeds, by J. C. WARD and R. RUSSELL, 1875. Solid only.
219*—Kippax, Church Garforth, by W. T. AVELINE, J. C.
 WARD and R. RUSSELL, 1876. Solid only.
220—Sherburn, by J. R. DAKYNS, 1871.

SHEET

- 221—Selby, by J. R. DAKYNS and A. C. G. CAMERON, 1882.
222—Wressle, Hemingbrough, by A. C. G. CAMERON, 1881.
223—Eastrington, by A. C. G. CAMERON, 1881.
224—North Cave, by C. FOX-STRANGWAYS, 1881.
225—Cottingham, Skidby, Kirk Ella, by J. R. DAKYNS, 1880.
226—Cottingham, by J. R. DAKYNS, 1880.
227—Sproatley, Preston, by C. REID, 1881.
228—Tunstall, Roos, by C. REID, 1881.
229—Todmorden, by J. R. DAKYNS, 1870. Solid only.
230—Sowerby Bridge, by J. R. DAKYNS, 1869. Solid only.
231*—Halifax, by J. R. DAKYNS, 1874. Solid only.
232*—Birstal, Heckmondwike, by R. RUSSELL, 1873. Solid only.
233*—East Ardsley, Rothwell, by A. H. GREEN, R. RUSSELL, and T. V. HOLMES, 1876. Solid only.
234*—Castleford, by W. T. AVELINE, A. H. GREEN, R. RUSSELL, and T. V. HOLMES, 1876. Solid only.
235—Brotherton, by W. T. AVELINE, 1872.
236—Carlton, by W. T. AVELINE, 1872.
237—Howden, Goole, by A. C. G. CAMERON, 1881.
238—Blacktoft, Saltmarshe, Hook, by A. C. G. CAMERON, 1881.
238A—Brough, by C. FOX-STRANGWAYS and A. C. G. CAMERON, 1881.
239—Welton, North Ferriby, Hessle, by C. FOX-STRANGWAYS and A. C. G. CAMERON, 1881.
240—Hull, by A. C. G. CAMERON, 1881.
241—Hedon, by A. C. G. CAMERON and C. REID, 1881.
242—Winestead, by C. REID, 1881.
243—Hollym, Withernsea, by C. REID, 1881.
244—Blackstone Edge, by J. R. DAKYNS, 1870. Solid only.
245—Riponden, by J. R. DAKYNS, 1869. Sold only.
246*—Huddersfield, by J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1871. Solid only.
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In the case of anonymous articles (ANON.) and all works published in *London*, examples of which occur on most of the pages, no reference has been made either to 'Anon.' or '*London*' in the index, though the gist of the items is, of course, indexed as usual.

It is perhaps as well to bear in mind that any references to pages after 476, refer to the localities on, and authors of, the geological survey maps and sections.

* This will be appreciated by those interested in topographical bibliography.

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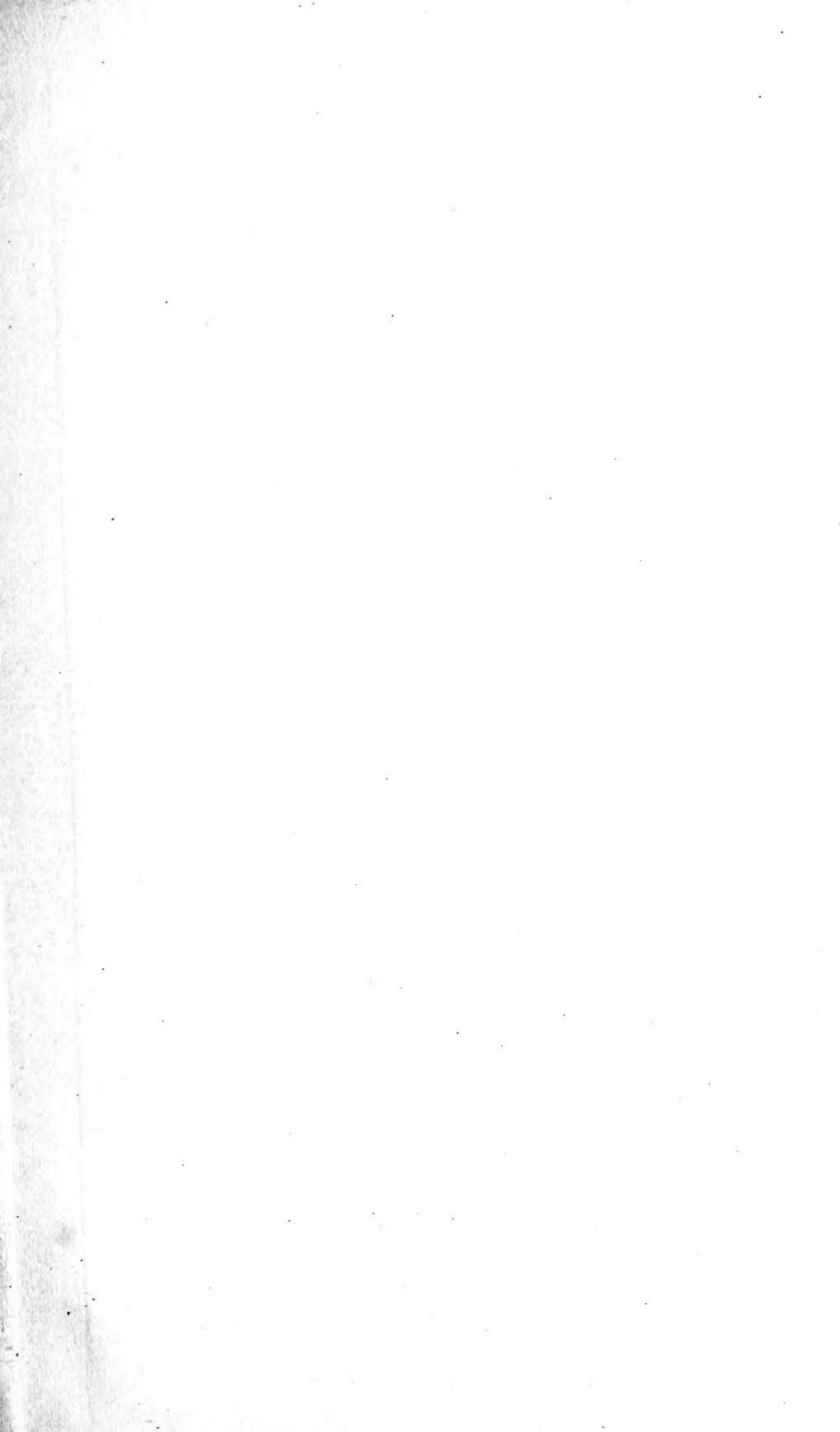
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